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EXTRACTUM IPECAGUANHA FLUIDUM.

BY RICHARD V. MATTISON.

Read at the Pharmaceutical Meeting, October 21.

The preparation of this extract is attended with some difficulty, and seems to have been a source of annoyance to our Pharmacopœia authorities. The last selection (U. S. P., 1870) is unfortunate in furnishing a product very thick and inelegant, though no doubt fully representing all the medical properties of the root.

When this extract is prepared according to the present formula, and diluted with syrup, as the Pharmacopœia directs, the result is a turbid syrup—the abhorrence alike of patients, physicians and pharmacists.

This proving very unsatisfactory in these days of elegant pharmacy, I, in accordance with the suggestions of Prof. J. M. Maisch, instituted a series of experiments, which resulted in the selection of the following formula:

Take eighty troy-ounces of carefully selected ipecac root, grind to appropriate powder, and, after moistening thoroughly, pack firmly in a cylindrical glass percolator, allow to stand four days as directed, then using the officinal menstruum, allow percolation to proceed slowly until the root is exhausted. To the percolate add ten fluid-ounces of glycerin, and evaporate at a temperature not exceeding 140° Fahr. (if the temperature is allowed to rise higher, a gelatinous mass will result) until reduced to the measure of fifty-five fluid-ounces. Transfer this to a moistened filter and allow to drain. To the soft mass remaining upon the filter, consisting of the peculiar substance usually called resin (though not so, properly speaking), water is added

by means of a spritz, and the whole thoroughly washed until the filtrate measures sixty fluid-ounces. This causes a reprecipitation of the resinous substance, which necessitates the refiltration of the filtrate. To this second filtrate twenty fluid-ounces of glycerin is added, and the whole well mixed.

This furnishes an extract containing in each pint two fluid-ounces less of glycerin than the officinal preparation, limpid, perfectly transparent, and one that can be mixed with syrup without turbidity, and in this respect will, I doubt not, meet the approval of all lovers of elegant pharmacy.

Philadelphia, Tenth month 10th, 1873.

EXTRACTUM AURANTII CORTICIS FLUIDUM.

BY MUNROE BOND.

Among the numerous fluid extracts admitted in the last edition of the Pharmacopœia are many which are scarcely if ever made use of, and rarely called for; while there are some, though not officinal, which are very frequently employed.

Amongst the last-named class there is none not officinal which is more universally used by the pharmacist of to-day than a fluid extract of sweet orange peel.

Owing to the highly aromatic and somewhat tonic properties which the rind of sweet orange possesses, it is extensively used as an ingredient in the multiform tonics and elixirs which are in vogue and so popular at the present time.

I have never, as yet, seen any formula published for its preparation, and being called upon quite often to prepare it, I have used various different methods with a view to ascertain the best way and most appropriate menstruum.

Having obtained a formula which furnishes a very satisfactory preparation, and which I consider a "desideratum," I present it to the readers of the *Journal of Pharmacy*.

Take of—

Sweet orange peel in moderately fine powder,	℥ xvi.
Glycerin,	fl. oz. iij.
Alcohol,	
Water, each a sufficient quantity.	

Mix fourteen fluid-ounces of alcohol with two fluid-ounces of glycerin;

moisten the orange peel thoroughly with twelve fluid-ounces of the mixture in a large wedgewood mortar, or any convenient vessel, and having covered it carefully, let it stand for twelve hours; then pack moderately firm in a suitable percolator, and proceed as directed in the officinal directions for preparing fluid extracts. Finish the percolation with a mixture of two parts of alcohol and one part of water; reserving the first fourteen fluid-ounces, add one fluid-ounce of glycerin to the remainder, carefully evaporate to two fluid-ounces and mix with the reserved portion.

Fluid extract of orange prepared in this manner has a heavy rich appearance, is permanent, and possesses all the aroma of the orange peel, if a fresh and good article of the drug has been employed.

One fluid-ounce added to fifteen fluid-ounces of simple syrup makes a stronger and better "*Syrupus Aurantii Corticis*" than the officinal. The resulting syrup is entirely destitute of any opaqueness, and its mode of preparation less troublesome than by the present formula, which is somewhat tedious.

Four fluidrachms of the fluid extract and a few drops of solution of citric acid mixed with one pint of syrup, make a syrup unsurpassed in delicacy of flavor and unfermentable for use at the mineral water counter.

Philadelphia, Sept. 20th, 1873.

BITTER WINE OF IRON.

BY CHAS. L. MITCHELL.

This preparation, so much in demand amongst practitioners at the present time, is, when rightly made, a most elegant tonic and stimulant. As often sold, however, it is of an inky color and taste, and quite repulsive to the patient. Taking advantage of the property which the hydrated sesquioxide of iron possesses, of removing the tannic acid from the different vegetable astringents and tonics, I have succeeded in making a preparation which is handsome, efficient, and pleasant to the taste. The formula is as follows:

Grd. Cinchona Calisaya,	192 grs.
" Gentian Root,	128 "
Soluble Citrate Iron,	192 "
Sherry Wine,	18 f. ozs.
Brandy,	1 "

Alcohol,	1 fl. oz.
Oil Orange,	12 minims.
Sugar,	2 ozs.
Solution Tersulphate of Iron,	2 f. ozs.
Water of Ammonia,	q. s.

Dissolve the oil of orange in the alcohol, and mix with the sherry wine and brandy. With this menstruum percolate the ground drugs, recovering 15 f. ozs. tincture by pouring on water. Dilute the iron solution with twice its bulk of water, and add ammonia until in slight excess. Wash the precipitate until the washings are tasteless, and drain thoroughly. Mix this precipitate with the percolated tincture, and allow to stand, shaking frequently, until a portion filtered off has a light yellow color and does not blacken with tincture of chloride of iron. Then filter, dissolve the citrate of iron and the sugar, and bring up the measure with a little water to 16 f. ozs.

Each fluidounce contains 12 grs. cinchona calisaya, 8 grs. gentian root, and 12 grs. of soluble citrate iron.

GLEANINGS FROM THE EUROPEAN JOURNALS.

BY THE EDITOR.

Test for Solania and Solanidia.—Equal volumes of concentrated sulphuric acid and alcohol are mixed; a trace of solania added to the warm mixture produces a rose-red, larger quantities a cherry-red color, which disappears after five or six hours, and the intensity of which is not affected by the presence of even large quantities of morphia. O. Bach regards this as very important, since in following Stas' process, morphia and solania are the only alkaloids which are not taken up by ether from alkaline or acid solutions. The solution of much solania in concentrated nitric acid is yellowish, and separates after ten hours colorless floccules, without acquiring a blue color.—*Journ. f. Prakt. Chem.*, 1873, 248.

Note on the Nessler Test.—J. Alfred Wanklyn.—In the course of the various controversies relating to the water process frequent mention has been made of the time required for the development of the Nessler color. According to some experimenters, a few minutes suffice for the full coloration; according to others, half an hour or more is necessary.

These differences have their origin in differences in the quality of the Nessler reagent. I have known two Nessler reagents which, although in the course of hours giving the same depths of color with the same quantity of ammonia, required very different times for the production of the coloration. One sample of Nessler reagent gives its maximum of color almost immediately, and another sample takes a quarter of an hour or an hour for a full development.

To a great extent, these differences depend upon whether or not a sufficient quantity of solution of corrosive sublimate has been added to the finished Nessler reagents. Whether the *Nesslerising* takes a couple of minutes, or whether it takes an hour, is a matter of vital importance to those persons who are working the ammonia process of water analysis; and since the employment of the ammonia process has become almost universal, I have deemed it to be worth while to direct attention to the necessity of a careful preparation of the Nessler reagent.—*Chem. News (Lond.)*, July 11, 1873.

Falsifications of Albumen.—A. Herburger.—Albumen is often adulterated with gum, dextrin and starch. To detect these admixtures, 30 grms. of the sample are dissolved in lukewarm water. After some time the mass is stirred. If the liquid contains many white clots, the quality is inferior; that is, a notable quantity of the albumen has been coagulated by the employment of too high a temperature during desiccation. The solution is mixed with acetic acid, and then some alcohol is added to the decanted acid liquid. If gum is present, a precipitate is formed. If starch has been added, it may be recognized in the usual manner by means of iodine. If the albumen contains sugar, it is easily recognized by the use of Fehling's test.—*Ibid.*

Red Ink.—Prof. R. Boettger recommends a red ink which is not affected by powerful chemical agents. The ink is prepared as follows: Carmine is triturated, in a porcelain mortar, with a little solution of soluble glass; afterwards more of this solution is added, until the desired shade and fluidity has been attained. The ink when used dries rapidly, with a gloss, and when not in use should be protected from contact with the atmosphere by closing the vial with an oiled cork.—*Chem. Centralbl.*, 1873, No. 30.

A Remarkable Reaction of Nitrobenzol.—Prof. Merz and Dr. Coray observed that, on heating nitrobenzol with hydrate of potassium,

a very copious evolution of inflammable gases takes place. If a few cubic centimeters of nitrobenzol are heated in a long test-tube with finely powdered potassa, the volume of the extricated gases is sufficient to produce, on ignition, a flame twelve to eighteen inches high.—*Pharm. Centralh.*, 1873, No. 39 from *Polyt. Notizbl.*

Testing Sulphate of Aluminum.—This salt sometimes contains free sulphuric acid, which can be ascertained by treating the salt with alcohol, in which it is insoluble, but which dissolves the uncombined acid, acquiring thereby an acid reaction. Pure sulphate of aluminum imparts to decoction of logwood a dark violet color, which changes to brown in the presence of free acid.—*Ibid.*, from *Reim. Fürberzeitung*.

Red Brown Wash for Wood.—1 lb. of sulphate of copper is dissolved in 8 lbs. of water, and the solution applied to the wood with an ordinary brush; this is to be followed by a solution of $\frac{1}{2}$ lb. ferrocyanide of potassium in 8 lbs. of water. The ferrocyanide of copper thus deposited upon the wood fibre is not only not altered by atmospheric influences, but it tends also to preserve the wood from the growth upon it of moss, lichens, fungi, and from the attacks of insects. The color may be darkened or lightened by increasing or decreasing the strength of the solutions, and the wash will be more permanent if the wood afterwards receives a coat of boiled linseed oil or varnish.—*Ibid.*

An Emulsion of Petroleum with Soapwort Decoction has been proposed by Jordery to lessen its inflammability while being transported or stored. A concentrated decoction of soapwort will, by constant stirring, readily emulsify twenty-five times its volume of petroleum, and this mixture gradually becomes firmer in consistence. In this condition petroleum does not readily penetrate into the fissures of the barrels, and its volatility is considerably lessened. The addition of a few drops of carbolic acid, or of a somewhat larger quantity of crystallizable acetic acid, renders the mass liquid again in a few minutes, and the petroleum rises clear and limpid to the surface of the aqueous solution.

In a report to the *Conseil de salubrité de la Seine*, Mr. Troost speaks favorably of this invention, and states that it deserves the attention of all interested in the sale of petroleum, notwithstanding the process in its present state does not yet appear to be adapted

for introduction into practice.—*Journ. de Pharm. et de Chim.*, 1873, May, 348, 349.

Pills of Oil of Turpentine.—Lachambre has modified Dannecey's formula, and operates as follows: 20 grams of white wax are fused together with 8 grams rectified oil of turpentine; the mixture is poured into a mortar, and after cooling mixed with 9 grams of powdered sugar; the mass is now divided into pills, weighing 25 centigrams, each of which contains 5 centigrams ($\frac{1}{4}$ grain) of oil of turpentine. The addition of 2 drops of oil of lemon improves the odor. The pills are rolled in powdered starch and preserved in well-stoppered vials.—*Ibid.*, Sept., 224.

ON THE ADMINISTRATION OF CASTOR OIL.

By E. GREGORY.

Castor Oil is indisputably nauseous and unpleasant to take, so much so that some patients cannot be induced to swallow it, by any device or on any consideration. At the same time its qualities are such that in some disturbed states of the system no other purgative can be substituted with safety. On this account a great deal of ingenuity has been exercised in endeavoring to devise means by which the dose may be swallowed without tasting it. So far as I know, success in this attempt has been only partial, and I fear the difficulties in the way are too great to be entirely overcome. Efforts seem to have been made in three directions: first, to enclose the oil in a tasteless envelope, such as the hard and soft castor oil capsules. To these there seem to be two objections. One, from the number of capsules necessary to be taken for a purgative dose; the other from the fact that most of the makers, in their efforts to reduce the size of the dose, have been tempted to add a foreign ingredient, such as podophyllin, or croton oil, both of which are of so drastic a nature as to make it unwise to give them to a delicate patient. The second class of efforts have been made principally by medical men and nurses, and have consisted in floating the oil on some vehicle, such as tea, coffee, punch, wine, beer, etc., etc. The result is that the patient, in spite of the most careful management, finds some of the oil sticking to his mouth, and sinks back in the bed with the conviction impressed on his mind that oil is abominable stuff. The most successful vehicle of this kind that has come under my observation is flax-seed

tea, well sweetened and flavored with any agreeable aromatic. If the oil be floated on this, and before the dose is taken, the lungs be thoroughly exhausted, so that the whole can be drunk with a deep inspiration, the taste is very little noticed. The third direction in which inventors have exercised their ingenuity in endeavoring to cover up and disguise the unwelcome flavor is by adding various ingredients to the oil, and by making it into an emulsion. Of this class are Copland's Sweet Castor Oil, which answers admirably for children, but for adults has the disadvantage of retaining its natural appearance, and of being much too thick and clammy for reasonably pleasant use. Wilson's Castor Oil Emulsion has the taste well disguised, and has a little less of the clamminess, but is open to the objection of being too thick, and there is just the suspicion in my mind that the strength may have been fortified by the addition of some more powerful purgative.

. In the May number, p. 357, of the JOURNAL is an article by Mr. Herbert G. Rogerson,* in which he gives a formula adapted to emulsify most oils and balsams. It certainly makes a very nice looking preparation, having a white pearly lustre, and with the taste and smell of the active ingredient very well disguised. But it is too thick and must be gulped down.

For some twelve or fourteen years past I have used the following formula for a Castor Oil draught which has proved very acceptable to adults who could not get down the pure oil. For children it does not answer so well, the dose of necessity being double that of the oil:

R. Ol. Ricini, ʒj.

Mucil. Acaciæ, ʒij.

Shake well together, then add

Syr. Simp. ʒij.

Shake again, then flavor with Spts. Menthæ Pip., or according to taste, and make up two ounces with water. This mixture can scarcely be called an emulsion, but it mixes well on vigorous shaking. The taste is well disguised; it is thin enough to be easily taken from a wine-glass, and it leaves no oil sticking round the mouth. I have lately obtained still better results from the following formula:

R. Ol. Ricini, ʒj.

" Anisi, gtt x.

Chloroform, gtt x.

* American Journal of Pharmacy, April, 1873, p. 174.

Shake well together, then add

Mucil. Acaciæ, ʒss.

Shake well and make up to 2 ozs. with water. I know not whether this may be considered an infringement on Mr. Copland's patent, but it is a very nice looking and palatable preparation, and does not separate so speedily as the last.—*Pharm. Journ.* (Canadian) Sept., 1873.

Lindsay, July 25th.

ON A CURIOUS REACTION OF BENZOIC, SALICYLIC, AND HIP-
PURIC ACIDS.

By T. L. PHIPSON, Ph.D., F.C.S.

When benzoic acid and glucosé, in the proportions of about 8 equivs. of the former to 1 equiv. of the latter, are mixed with a large excess of monohydrated sulphuric acid, and the mixture is slightly warmed, a fine blood-red color is developed, very similar to that produced when salicin or willow-bark are touched with concentrated sulphuric acid. After a while the mixture becomes brown, and then blackens. Benzoic acid alone does not produce this reaction. It matters little whether the glucose is artificial or natural.

Salicylic acid, with glucose, treated in the same manner, presents the same reaction in a still more decided manner.

Hippuric acid, with glucose and sulphuric acid, gives first a clear brown mixture, in which also the blood-red color soon develops itself; then the whole mass becomes black, and evolves a large quantity of an odorless and colorless gas. This gas is not absorbed by water nor by potash, and is inflammable, burning with a blue flame; I conclude that it is chiefly oxide of carbon. As the reaction continues from this time, after the source of heat is withdrawn, the mixture soon becomes very hot, and then sulphurous acid is given off also.—*Chem. News*, Lond., July 11, 1873.

A PROPOSITION FOR A SIGN TO BE USED BY MEDICAL MEN
TO MARK UNUSUAL DOSES IN PRESCRIPTIONS.*

By R. HAMPSON.

In proposing a sign, for the adoption of medical men, to denote with unerring significance the prescribing of unusual doses, I feel that I may almost be open to the charge of trespassing upon medical ground, and I must admit that a proposal of this kind would have

* Read before the British Pharmaceutical Conference, Sept. 16th.

come with greater propriety from medical men themselves. I believe, however, in the light of a recent painful event, that the time has arrived when the adoption of a distinctive sign will be welcomed both by the prescriber and the dispenser.

The interests of pharmacutists are in a great measure so identical and so intimately bound up with the physician's interest in his patients' welfare, that the adoption of a sign, if recommended by this Conference, will, I have no doubt, be received by the medical profession with proper consideration and respect.

An unusual dose I define as a dose in excess of the maximum adult dose of the Pharmacopœia, or a dose exceeding that commonly administered.

Our experience as dispensers of medicines will have fully proved to us that the marking of unusual doses would be accepted as a long desired boon by all concerned.

The prescriber, in employing an accepted sign, of easy recognition, would be assured by its use that it would remove all hesitation and questioning doubt from the mind of the dispenser, and that it would ensure for his patients the receiving of the prescribed medicines without needless delay—which delay, in some cases, may mean loss of life or the suffering of unnecessary pain and watchfulness.

The pharmacist, whose occupation it would be to dispense the duly marked doses, would greet these unmistakeable signs with genuine pleasure and relief, and their use would save him considerable anxiety, as well as the loss of much time and the inconvenience so often caused in seeking out the prescriber's real intentions.

I shall not take up time in citing cases which have occurred to me individually, or in alluding to any brought under my notice, to prove that the use of a sign is imperatively demanded by the exigencies of the case. Every one present whose vocation it is to dispense prescriptions will call to mind frequent instances when an indicating sign to mark the unusual doses would have saved considerable time, trouble, and vexation.

It is certainly very remarkable that, in this country of practical expedients, a rule of this kind should not years ago have been in use.

In Germany and Austria, where many things are arranged by the strong hands of the state, a clearly defined rule, of a too arbitrary character for adoption here, set forth in the pharmacopœias of those countries, has been employed for some time, and this fact is presump-

tive evidence that a rule, or rather a sign, of some kind is required in this country.

It is folly to suppose, as averred, that we can have any conceivable interest in "limiting medical practice," or in any way passing a shade of criticism upon it. Our interest is almost necessarily in a contrary direction, and our duty is obviously clear and well defined. It is simply to provide with perfect integrity the medicines prescribed; but I certainly think we are entitled to have them prescribed as plainly and as legibly as possible; and when an unusual dose is required it is only reasonable to request that it shall be so described and signally marked that there shall be no room for doubt in the mind of the dispenser that the dose is really intended, and not *mis*-prescribed.

If doubt should exist as to whether a prescribed dose is intended, it is the dispenser's acknowledged duty to communicate speedily with the prescriber to ascertain his intentions.

We must not, however, let it be supposed that a pharmacist is *not* at liberty to decline to dispense a prescription in which an unusual dose of a remarkable character is prescribed.

My experience includes the dispensing of some very unusual doses, and I cannot forget the grave sense of personal responsibility dwelling in my mind whilst dispensing these particular prescriptions.

If we feel the responsibility too oppressive, we ought to consider ourselves fully at liberty to decline to dispense prescriptions of this exceptional character. I am sure we should never lightly exercise this undoubted right of refusal, or in any way forget to show, on such occasions, a proper and due regard for the delicate professional position of the prescriber.

As the object we have in view is of more importance to medical men than to pharmacutists, I trust the medical profession will give their willing and necessary aid in bringing about the general adoption of a sign to mark unusual doses. We may, I hope, also look with confidence to the medical journals to endorse our efforts to establish the use of that sign which may be considered to be the best suited for the purpose intended.

In Germany and Austria a point of exclamation is used to denote an unusual dose; thus—

Tincturæ Digitalis, *ziv!*

This is an excellent sign, and might answer the purpose in this country, but I am strongly disposed to think the use of the initial letters

of the prescriber's name is the best and most appropriate sign to be employed.

It is a custom in England to use the initial letters of a signature when a deed is altered to denote agreement or acquiescence, and there would be a legal value attached to the initial letters written by the prescriber, and they would be useful to compare with the actual signature, if a dispute at any time arose concerning a prescription to which they were attached.

The sign I offer for your acceptance is therefore the prescriber's initials in brackets, written immediately after the unusual dose; thus—

Tincturæ Digitalis, . . . ʒiv. [J.R.L.]

It would also be of inestimable advantage if the name and address of the prescriber were printed or written upon *every* prescription.

In the United States this is invariably done. (? Edit. Am. J. Ph.)

The loss of much valuable time would be obviated if the latter suggestion became the rule.

The prescriber's initials, which may be known only to a few pharmacutists, are not sufficient to denote proper authenticity, and the full name and address also afford protection to the prescriber and dispenser alike.

I hope this Conference will not only fully deliberate upon this important question, but will decide *unanimously* upon the sign to be suggested to the medical profession for their adoption, and it is equally desirable that a resolution embodying your decision be carried and duly published.—*Pharm. Journ. and Trans.*, Sept. 27, 1873.

PRELIMINARY NOTICE OF A NEW KIND OF PLASTER.

By L. E. SHAEL.

It is an uncommon practice among physicians to order an aqueous compound and an oily substance together in the form of a plaster. Commonly this case could be managed without producing serious complications, but when the mixture is to be applied upon another plaster, previously spread, then the skill of the dispenser is unduly taxed. Sometimes such directions could not be carried out by common means, and, therefore, it becomes optional with the compounder to change the character of the ingredients, or their proportion and quantity, as prescribed, or make additions which will afford the necessary consist-

ency; or in the event of non-compliance with the indications, fail in the attempt, and, without really good cause, sacrifice his reputation.

When the prescription is impossible, according to its letter, a conscientious pharmacist will always reserve to himself the necessary license to construe and execute it according to the spirit, as prompted by the occasion, an action justified by common reason, and conceded by the interests of both professions; and hence an operator deficient in this amount of judgment and application is unqualified to serve at the dispensing counter.

The physician desiring a certain combination, writes for a number of ingredients, in the proportion desired; but being himself no pharmacist, therefore utterly unskilled in this art, and consequently expects that the operator, with the proper capacity, will elaborate the requested, according to the art of pharmacy, and the essence of the order.

This, however, does not imply uncalled-for substitutions or mercenary interference with the quantities of expensive ingredients, neither does it confer the privilege of dispensing pills for powders, or liquid mixtures in the place of these, nor does it justify the dispensing of a greater quantity of medicine than the physician directs.

Utterly impossible combinations or dangerous mixtures or doses are of course, from *prima facie* evidence, referred to their author for correction or revision. A thoroughly competent pharmacist will never constitute himself the umpire in regard to the pathological merits of any case as appears from a prescription; a doubt in this regard does not find elucidation within the confines of the pharmacal art.

Now, however, if it is ordered to apply to the square inch of surface of a plaster of some particular kind, previously spread, an additional quantity of 5 to 10 grains each of some solid extract and some fixed or volatile oil, then it requires the intervention of another agency which will harmonize these extremely heterogeneous elements. The solid extract must necessarily first be softened with a small proportion of water; it will even then adhere only with difficulty to the plaster, but much more so after the addition of the oily substance, which produces a mixture that in most cases instantly separates when in a state of rest, and possesses no adhesiveness whatever. More oil or more extract would avail nothing, neither would a more solid fatty ingredient be of much consequence, but the incor-

poration of a moderate quantity of powdered tragacanth affords the desired and required assistance by which the mixture can be made to assume an adhesive, compact and uniform character, and thus be easily applied upon the plaster, which by aid of its exposed margin, will stick firmly and securely to the position in which it is placed on the skin.

Other plasters can be produced by the aid of powdered tragacanth, whereby large quantities of oil or extract can be employed, when spread upon sheets, with an adhesive margin. In every case, the extract is first liquefied with water and a small proportion of glycerin, the oily substance added, then thickened with powdered tragacanth, and finally spread upon any desirable base, with an adhesive margin.—*The Pharmacist*, August, 1873.

ON THE PRESERVATION OF FOOD.

By S. P. SHARPLES, S. B.

One of the surest signs of advance in civilization is the increased attention that is being paid to the subject of furnishing improved articles of food for the masses, at such a rate and in such quantities that the use of fresh fruit and vegetables out of season is no longer confined to the tables of the wealthy. One of the earliest efforts of man, when emerging from the primitive savage state, is to provide food for the morrow, for so long as he is dependent on the daily chase for his means of sustenance he can make but little progress, and, moreover, the tribes who live from hand to mouth lead but a precarious existence—feasting to-day and starving to-morrow.

One of the earliest methods of preserving food is by simply drying it, either in the open air or by aid of the smoke of a smoldering fire. This latter method furnishes a curious instance of the way that science is so often anticipated in her methods by those who know nothing of her principles. The creasote of the smoke acts as the preservative. Carbolic acid, a nearly allied substance, is recognized to-day as one of our best preservative agents, although creasote still holds its own. The objections to drying meats are that the flesh is rendered more or less unpalatable, and, unless it receives some previous treatment, is apt to putrefy somewhat in the operation. The most common method of treatment employed is to either soak it in a strong solution of common salt, or to rub it with a mixture of common salt,

saltpetre, and sugar or molasses, this last being the method by which the well-known sugar-cured hams of the West are prepared. The use of salt and other chemicals is objectionable, from the fact that they more or less impair the original flavor of the meat, and if the provisions prepared in this way are indulged in for a length of time they are apt to produce disease. The action of salt has never been thoroughly explained; salt and sugar are supposed by some to owe their preservative effects to the fact that they abstract water from the article to be preserved; others claim that salt acts by coagulating the albuminoid bodies which give rise to putrefaction; while still a third class, including most of the prominent investigators in this line of research, allege that salt, carbolic acid, creasote and similar articles act as a poison to infusoria and thus prevent the commencement of decay.

Shortly after the discovery of oxygen, it was observed that if oxygen in a free state was completely excluded from animal or vegetable matter, they might be preserved for an indefinite length of time. This fact, like many others, had been used blindly and imperfectly for ages. The bodies of men and animals had been preserved in cloths saturated with pitch and rosins, and the great were buried in leaden coffins, hermetically sealed. But no practical use of this fact seems to have been made until the year 1807, when a patent was granted in England for pouring a hot solution of gelatin or meat extract over the meat, so as to completely exclude the air. This has since been a favorite method with inventors, who have endeavored to preserve meats by covering them with various impervious substances, but they have not generally proved very successful, it being exceedingly difficult to keep such coverings intact.

The patent which may be said to have given rise to the modern industry of packing meat and vegetables in air-tight cans was one granted in England to Peter Durand, in August, 1810. The main points of this patent are as follows:

First.—Preserving animal food, vegetable food and other perishable articles a long time from perishing and becoming useless, by excluding all communication with the external air. The articles are enclosed in bottles, or other vessels of glass, pottery, tin, or other metals or fit materials, and they are closed by the usual methods of corking, soldering, luting or cementing. Further, making use of vessels with stoppers fitted or ground with emery, or screw caps, with or without a ring of leather or other soft material between the faces of closure, or with covers of cloth, leather, parchment, bladder and the like.

Second.—Immersing the vessels which have been thus charged—and well closed—completely in cold water, gradually heating to boiling, and continuing the boiling for a certain time. Vegetable substances to be put into the vessels in a raw and crude state, and animal substances to be partly or half cooked, although these may be put in raw.

Lastly.—Although the application of the water-bath as described is preferred, an oven or a stove or a steam-bath may be used, and also the aperture, or a small portion thereof, may be left open, and is closed when the effect of heat has taken place.

This is the whole art of canning fruits as practiced to-day, although experience has suggested certain modifications. Numerous patents have since been granted, both in England and in this country, for details of the process, such as using a bath of chloride of calcium in place of pure water, as by this means a much higher temperature can be obtained. Another patent is a modification of the last clause of the above; the cans are first closed completely and then a small hole is punched in the cover to allow the heated air and steam to escape; this is afterwards closed by soldering. Various modifications of the vessels above described, such as peculiar methods of constructing the mouths, using rubber in place of leather, and using clamps in place of the screw cap, are also found on the records; but in all essential particulars the old patent remains unchanged.

A great deal of interest has been recently excited by a decision of Judge Clifford, of the U. S. Court, in the case of a patent granted to Isaac Winslow for preserving green corn. In the course of this trial the processes now used were pretty fully explained, as follows: The corn, or other vegetable, is gathered in as fresh a state as possible, and is prepared by removing all refuse or imperfect parts, and such parts as would add to the bulk of the finished product, without increasing its value, as the hulls of peas and beans and the cores of the corn. The prepared articles are placed upon coolers, which are surrounded by ice water until wanted for use. The utmost care must be used in this preliminary process to avoid any mixture of immature, over-ripe or defective specimens, as a few such will spoil the lot. The cans are filled with the vegetables as quickly as possible and are hermetically sealed by soldering on the covers. Tin is almost exclusively used for packing, at present, as great loss is incurred from breakage when glass is employed. The tins are, moreover, much easier to make and keep tight than is the case with glass jars. The cans are then placed in the bath, and heated from one-half of an hour

to four hours, according to the nature of the article—if it is comparatively dry, as peas, beans or corn, it takes much longer heating than if juicy, like tomatoes, the latter being one of the easiest articles to preserve. In some cases a small hole is punched in the lid previous to heating; this is left open until the steam escapes freely, and is then sealed; others do not punch this hole until after the can has been heated for some time, and still others do not consider it necessary to vent the can at all. The advantage of venting the can when it is first placed in the bath, and allowing it to remain open until the steam issues freely, are several. In the first place, the air is completely removed before it has had time to act upon the fruit. If sealed first and vented after it is hot, the confined air tends to burst the can, and also acts upon the flavoring matter of the vegetables, and tends to make it somewhat stale. But the greatest advantage of venting is the fact that a can vented and sealed when hot partially collapses as it cools, and the heads sink in; so long as the can is in good condition the heads remain concave, but if by any accident it commences to ferment the heads at once swell out, and it becomes what is known in the trade as a "swell head."

Meats, from their greater susceptibility to change and decay, are much harder to preserve, and recourse is generally had to some chemical agent. The most common of these are the alkaline or earthy-alkaline sulphites. These are added in a minute proportion to the contents of the can before sealing, and serve either to destroy what little free oxygen remains in the can, by combining with it, or, what is more probable, act as poisons to infusoria.

Some persons have conceived the idea that canned goods are not healthy, and much difficulty has been experienced in introducing canned Australian and South American meats among the working classes in England, from their being prejudiced against articles that they could not inspect before buying. This prejudice is, we are happy to say, rapidly dying out. The State Board of Health of Massachusetts made some elaborate investigations upon the subject of the contamination of such articles by lead, tin or copper from the cans. These were a complete failure so far as proving any injurious quantities of these metals to be present.

The length of time which articles thus sealed may be preserved is still unknown, and there is no reason to doubt that they will be kept perfectly until the cans are destroyed by external agencies. Dr.

Letheby exhibited, at a lecture before the Society for the Encouragement of Art, cans of mutton which had been packed forty-four years before, and had been exposed for some years during summer and winter to an Arctic climate. They were still in a good state of preservation.

The business of canning goods received its first impetus from the necessity of supplying Arctic and other voyagers with palatable food; when it was found that this could be done with ease and profit the trade was soon extended, and it has now become one of the leading industries. The amount of capital invested is very great, and, contrary to general opinion, the profits are but small.

While the general process of canning is free to all, there is scarcely a packer but who has, or imagines he has, some special secret by which he is enabled to put up either a better or cheaper article than any one else. The business requires considerable experience to carry it on successfully, and considerable cash capital, as labor and materials must all be paid for with cash, and returns are often slow, a heavy stock having at times to be carried over.

The number of cans of peaches packed last year approximated about twelve million, tomatoes eighteen million, and corn from six to eight million. The headquarters of peach canning are in Maryland and Delaware, more than half the peach-packing firms hailing from Baltimore alone. Large quantities of oysters are also put up along the Chesapeake. Tomatoes come chiefly from New Jersey, although many are packed in Baltimore, New York, and in the Eastern States. The best corn comes from Maine, where are also situated the largest lobster establishments.—*Journ. of App. Chem.*, Aug., 1873.

ON THE PREPARATION AND COATING OF IODIDE OF IRON PILLS.*

By MR. MAGNES-LAHENS.

The conditions which assure the best preparation and conservation of the iodide of iron pills, are as follows :

1. For the preparation of iodide of iron, to be used for pills, employ very little water, so that a pill mass of good consistence may be obtained with very little evaporation.
2. Avoid the filtration of the solution of iodide of iron ; it alters the salt, and a portion of it is lost by being retained in the filter.

*Translated from *Journ. de Pharm. et de Chim.*, 1873, Oct., p. 328—330.

3. Take a sufficient quantity of iron, so that a small quantity of it will remain in excess after the complete saturation of the iodine; this excess of iron prevents the alteration of the iodide, during the preparation as well as while keeping the pills.

4. Substitute a mixture of gum and sugar for the honey, which presents the triple inconvenience of being acid, of rendering the exact formation of the pill mass rather difficult owing to the water, which it contains in great abundance, and of being very hygrometric when concentrated.

5. Use gum arabic in preference to gum tragacanth, because it gives a mass less elastic, more homogeneous and dissolving better and quicker in the stomach.

6. Use an iron dish instead of glass or porcelain vessels.

7. Operate at a temperature of 50° to 60° C. (122° to 140° F.) These rules form the basis of the formula, and of the mode of operation, which is as follows:

Take of—

Pure iodine,	4.10 grams.
Powdered iron,	1.90 "
Powdered sugar,	2.50 "
Powdered gum arabic,	2.50 "
Distilled water,	2.50 "

Put in an iron dish the water and the powdered iron, add the iodine gradually, and facilitate the reaction by stirring with a spatula of iron and by warming a little; when the reaction is complete, add the gum and the sugar, then heat to about 50° C., stirring continually, and until the mass will cease to drop, when a little is taken up with the end of the spatula. When that has been reached, the operation offers no further difficulties; the pills may be readily rolled out and coated.

To obtain the pills, incorporate into the mass 5 grams of powdered liquorice root, if necessary; heat it for some minutes, divide the mass into one hundred pills, roll them in the powdered gum, and, if desired, coat with mastic and tolu.

For sugar-coated pills (*dragées*), incorporate with the mass 7.50 grams of powdered gum arabic, then heat it slightly to soften it. The hundred pills obtained are rolled in powdered gum arabic, then placed in a suitable vessel, heated and agitated with a circular motion until of the proper hardness, after which they may be sugar-coated.

Each pill and each dragée contains about 5 centigrams of iodide of iron and one centigram of powdered iron.

The iodide of iron is in a state of perfect purity, and may be dosed with great precision. Put in cold water some months after their preparation, they will dissolve, save the excess of iron, without coloring it.

The following is the mode of coating as proposed by Mr. Magnen-Lahens: Roll the pills quickly, about fifty at a time, with the hand in a clear mucilage of gum arabic spread thinly in a saucer; when they are completely moistened throw them into a basin containing a mixture of sugar, 9 parts, with gum arabic one part; agitate them until they are covered with a layer of the powder, heat them for about eight or ten minutes, at first very slightly, and afterwards increase the heat, rotating the pills continually. After cooling coat them a second and then a third time, following the process just described. These pills may thus be prepared in small or large quantities; in the latter case they should be put in the drying closet after each coating. Made with this precaution they will keep a long time in good condition.

C. J. M.

THE SEPARATION OF THE MIXED ALKALOIDS FROM CINCHONA BARKS.

BY DR. J. E. DE VRIJ.

Recently a London firm of manufacturing chemists, who had read with interest my paper on cinchona alkaloids published in this Journal, applied to me to inform them "by what means I separate the mixed alkaloids from the dry bark." I therefore suppose it may perhaps be useful also for other readers of this Journal if I publish my actual method—which has been published in a Dutch periodical in 1871—also in this Journal. 20 grammes of powdered and sifted bark, dried at 100° C., are mixed with milk of lime, made of 5 grammes of dry slaked lime and 50 grammes of water. This mixture is slowly dried, and when entirely dry, heated in a flask with 200 cubic centimetres of very strong spirit (the strongest possible) till it boils. After cooling and subsiding, the clear liquid is poured on a filter large enough to contain all the bark, but not larger than is strictly necessary (a filter of 15 centimetres diameter is sufficient). The residue in the flask is now mixed again with 100 cubic centimetres of spirit, this mixture well shaken, and poured on the filter.

When all the liquid has passed through the filter, the powder remaining on the filter is washed with 100 cubic centimetres of alcohol, so that in the whole 400 cubic centimetres of alcohol are used for 20 grammes of bark. The united liquors are now slightly acidulated with weak sulphuric acid, whereby a precipitate of sulphate of lime is formed. After this has subsided the greater part of the liquor can be poured off, the rest being filtered through a small filter. The clear liquid is now distilled to obtain the greater part of the spirit used, and the remaining liquid poured into a capsule, to which is added the spirit and the water by which the distilling apparatus is subsequently washed. The capsule is now heated on a water-bath till all the spirit has been expelled, and the remaining liquor which contains all the alkaloids in the form of acid sulphates, is, after cooling, filtered through a small filter. On the filter remains a mixture of quinovic acid and fatty substances, which must be washed repeatedly with water slightly acidulated by sulphuric acid till caustic soda no longer produces any turbidity in the passing liquid. The filtrate is now reduced to a small volume by heating on a water-bath, and while *still warm* precipitated by a slight excess of caustic soda. The benefit derived from this kind of precipitation is that the alkaloids precipitated from a warm solution are less voluminous, and can, therefore, more easily be washed. The drawback, however, is that the alkaloids from some barks melt under these circumstances, which drawback can, however, easily be rectified by powdering carefully the alkaloids after the cooling of the liquor, and collecting this powder on a small filter. After washing with the smallest possible quantity of distilled water, sufficient to remove the soda salt but not to dissolve quinine, the filter is laid upon blotting paper, and this so often renewed till the mixed alkaloids can easily be separated from the filter without adhering to it, which can be done before they are entirely dry, but requires some practice. They are then heated in a weighed capsule on the water-bath, till repeated weighings show that the weight remains constant. The observed weight multiplied by five gives the amount of mixed alkaloids in 100 parts of bark.

The amount of quinovic acid can be ascertained in the meantime, if the mixture of quinovic acid and fatty substances be treated with a weak solution of caustic soda, by which a great part of this mixture is dissolved. If to this turbid solution a slight excess of chloride of calcium is added, only the quinovate of lime remains in solu-

tion and can be obtained in the shape of a clear slightly-colored liquid by simple filtration. If this clear liquid be acidulated by hydrochloric acid, the quinovic acid is precipitated in the shape of a voluminous jelly. As the amount of quinovic acid is generally very small, its quantity can rarely be ascertained with accuracy, unless the amount of bark be not under 40 grammes. As I generally make two analyses of 20 grammes of bark, I combine the mixture of quinovic acid, etc., of the two filters for the determination of the quinovic acid. If the two analyses are carefully performed under the *same* circumstances, the results differ only very slightly, as may be seen in my analysis of some Jamaica barks, published on p. 121 of this Journal.

The Hague, 17th September, 1873.

—*Pharm. Journ. and Trans., Sept. 27, 1873.*

NOTE ON THE HYDRATION OF EXTRACTS.*

BY CHARLES EGIN, F.C.S.

It has occurred to me that Wanklyn's method of limited oxidation by means of an alkaline solution of potassium permanganate might be applied with good results to the assay of such medicinal extracts as are dependent for their activity entirely, or for the most part, on certain alkaloids—all alkaloids yielding a certain portion of their nitrogen as ammonia. Also that it might be made available for the determination of the relative values of the first year's and second year's plant of hyoscyamus, about which a good deal has been taken for granted but nothing yet really proved. And again in the case of conium, to determine which has the greater activity, a tincture made from the fruit or from the leaves. Of course the difficulty lies in the complete and easy separation of the vegetable proteides of the plant juices, but I am by no means sure that this is not a difficulty that can be overcome, although I regret I have not yet had time to go sufficiently into the subject so as to be able to lay results of any value before this meeting of the Conference. I have had, however, incidentally to determine the amount of water in various extracts, and have thus so far answered question 66 on the blue paper circulated by the Conference, viz., "Is it possible to assign a definite degree of hydration to medicinal extracts with a view to uniformity of strength?"

* Read before the British Pharmac. Conference.

I believe it is quite possible to do so, certainly with some if not with all extracts.

I find that extracts of fair average consistence for pill-making, when subjected to the heat of a water-bath, in the cases of belladonna and hyoscyamus lose 20 per cent. of their weight, and in the case of conium, 25 per cent.

The plan I adopted was to spread the extract very thinly on a thin platinum capsule, and dry at a temperature of 212° until it ceased to lose weight. Various experiments with the same extract gave in this way very constant results. At first I operated on quantities of 10 grains at a time, but I found that several hours were then required for complete desiccation, whereas if only one or two grains were used the time required was little more than half an hour.

The consistence of extracts varies so much that it would seem advisable to define in the Pharmacopœia the amount of water each should contain, the amount to be determined as I have recommended. When once a standard has been set up there would be practically little difficulty to manufacturers, for I find after a few trials the eye can determine from the consistence of the extract, to less than 1 per cent., the amount of water present.—*Pharm. Journ. (Lond.)*, Oct. 11, 1873.

THE ACTION AND RELATIVE VALUE OF DISINFECTANTS.*

By J. A. WANKLYN.

If we heat the infectious material of, for instance, scarlet fever to a red heat, we destroy it. There can be as little doubt that, if we bring chlorine gas thoroughly into contact with infectious material, we destroy it likewise. If we boil it with oil of vitriol, or with permanganate of potash, we destroy it. Probably, too, if we soak it in concentrated carbolic acid, or treat it with excess of corrosive sublimate or arsenious acid, we render it inert. It is, indeed, highly probable that every kind of infectious material is capable of being rendered inert by thorough contact with any powerful chemical reagent.

But if the heat be only gentle, and if the chemical agent be dilute,

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in London, August, 1873, and printed in the "British Medical Journal."

there is absolutely no reason for believing that, by the employment either of the one or of the other, we are so much as contributing towards the destruction of infection. There is a difference not only in degree, but even in kind, between the action of the same chemical when concentrated and when dilute. Concentrated sulphuric acid will convert cane-sugar into a lump of charcoal, but dilute sulphuric acid transforms it into dextrin and glucose, and, curiously enough, fits it for undergoing septic changes. So, again, very dilute bleaching powder has actually been found to favor the development of certain low forms of life; and Pettenkofer, as is well known, has found that germs whose development had been arrested by carbolic acid, start into life when the carbolic acid is still further diluted.

In the practical employment of disinfectants, the fact that dilution frustrates the action of a disinfectant has been very generally lost sight of. Attempts have often been made to disinfect the atmosphere. It is even said that, during the panic occasioned by the cattle-plague, the commissioners endeavored to disinfect the general atmosphere of the agricultural districts by turning cattle adrift with towels soaked in carbolic acid attached to their horns. I need not insist on the futility of such a proceeding; or, indeed, on the necessary futility of any effort to eliminate anything by chemical means from the general atmosphere covering our fields or occupying our streets. But it will probably not be quite needless to insist upon the impracticability of attacking the very limited atmosphere of a dwelling-house by chemical means. Certain very simple considerations will, however, suffice to throw the utmost doubt on the utility of endeavoring to purify air which has suffered contamination.

In a well-known official memorandum, drawn up, I believe, by Professor Rolleston, of Oxford, directions are given for the disinfection of a room with sulphurous acid. So much sulphur (the quantity proportionate to the size of the room) is to be burnt, and doors and windows are to be shut; and the memorandum winds up with the statement that, if a man be able to abide in the room for one instant whilst the disinfection is being carried on, then the disinfection is not to be depended upon. In other words, it is admitted that, not until you have put so much sulphurous acid into the air as to make it totally unfit to breathe, have you disinfected that air. The same certainly holds generally in regard to other agents; and, in short, we cannot hope to purify the air of a room by any chemical means without spoil-

ing the air. It is therefore useless to try to disinfect the air. This is strikingly illustrated in reference to printed directions relative to the practice of disinfection. See, for instance, Dr. Wilson's little card, "Disinfectants and how to use them."

"Chlorine gas, poisonous and irritating to the lungs when in excess. For an occupied room, close fire-place, windows, etc., as directed under F. Pour over a quarter of a pound of black oxide of manganese in a dish placed high half a pint of muriatic acid (spirit of salt), and leave for six hours. It bleaches, and is apt to make white-limed walls sweat—useful for cabs."

Now if we take a room, say 13 feet by 13 feet and 13 feet high, or of a capacity of about 39 cubic metres (and that is not a very large room), and if we calculate what proportion by weight the chlorine liberated by the quarter of a pound of oxide of manganese will amount to, we get about 3 parts of chlorine in 1000 parts of air. In point of fact, however, the proportion of chlorine in the atmosphere of such a room would never reach anything like 3 per 1000, inasmuch as walls are not impervious, and during the six hours the air would have changed, and 3 parts per 10,000 would probably be nearer the true proportion. But this is the room not fit to inhabit by reason of the presence of chlorine. The minuteness of the dose of chlorine which the inhabited room receives may be left to your imaginations. To me it seems that the wisdom of the physician who places his little saucer with bleaching powder and muriatic acid in the chamber of his patient, is comparable with that of the cattle-plague commissioners who tied the carbolized cloths to the horns of the cattle.

Experience confirms that which an appeal to first principles suggests; and we are informed that, during the Franco-German war, although the hospitals stank of carbolic acid, yet wounds were not healthy. Although I believe that the purification of air which has once been defiled is a hopeless task, yet it by no means follows that disinfectants have nothing to do with purity of atmosphere. It is open to us to abstain, in a very large degree, from rendering the air impure.

By the efficient application of disinfectants to foul surfaces, we may hinder defilement of the atmosphere of our dwellings. One of the main functions of a serviceable disinfectant is that it shall be antiseptic: that it shall postpone decomposition and putrefaction until a convenient season. A good disinfectant should not itself defile air,

neither should it be dangerously poisonous or corrosive. There is a very common substance which has long been used to hinder putrefaction. It does so only in a concentrated form. It has no smell; it is not poisonous. It can hardly be said to be corrosive. Its name is common salt. I hold that this substance and its analogues—the chloride of calcium and the chloride of magnesium—are the most available general disinfectants.—*Pharm. Journ. (Lond.)*, Sept. 13th, 1873.

Artificial Ivory.—Two pounds of pure india rubber are dissolved in thirty-two pounds of chloroform and the solution saturated with purified ammoniacal gas. The chloroform is then evaporated or distilled off at a temperature of 185° Fahr. The residue is mixed with pulverized phosphate of calcium or carbonate of zinc, pressed into moulds and cooled. When the phosphate of calcium is used, the resulting compound partakes in a great degree of the nature and composition of genuine ivory, for we have the requisite proportion of the phosphate, and the india rubber, which takes the place of the cartilage; and the other component parts of the genuine article are of little importance.—*Scientific American*, Aug. 30, 1873.

Minutes of the Philadelphia College of Pharmacy.

PHILADELPHIA, Ninth month 29th, 1873.

The Semi-Annual Meeting of the Philadelphia College of Pharmacy was held this day at the College Hall; fifty-three members present. In the absence of the President, Robert Shoemaker, Vice President, was called to the chair.

The minutes of the last meeting were read and adopted. The minutes of the Board of Trustees were read for information by Wm. C. Bakes, Secretary of the Board.

By these minutes we are informed of the adoption of an amended rule, changing the qualifications for graduation in the College, and also of the adoption of a new certificate to be issued to wholesale druggists and manufacturing pharmacutists, differing from the diploma, to be called a "Certificate of Proficiency."

They inform us also of the election of the following gentlemen to membership in the College, viz.: Hans M. Wilder, Oliver T. Jester, Charles Wirgman.

Prof. Maisch, on behalf of the Committee appointed to write a letter of congratulation to our honorary member, Carl Frederking, of Riga, read a copy of the very interesting epistle, dated July 7, which was approved and directed to be entered on the minutes.

Prof. William Procter, Jr., on behalf of the delegation appointed to attend

the meeting of the American Pharmaceutical Association, held in Richmond, Va., made the following report, which was accepted and ordered to be placed on the minutes.

To the Philadelphia College of Pharmacy :

The delegates appointed to attend the meeting of the American Pharmaceutical Association, at Richmond, Va., report that the meeting was held at the time and place appointed, and was an occasion of unusual interest, both from the number in attendance and the variety of interesting papers and reports presented. The meeting was opened by President Ebert in a few remarks, when he introduced Mayor Keiley, Mayor of the City of Richmond, who, in a remarkably forcible and eloquent speech, welcomed the Association to that city. A large portion of the visiting members came in the steamer from Norfolk, and were met a few miles below the city by the Committee of Reception from the druggists of Richmond on a barge, and conveyed to the landing, and thence to their hotel in stages. The welcome extended was most warm and friendly, and through the entire continuance of the session in various ways. The members were reminded, by attention to their wants and inquiries, that they were among a people on hospitable aims intent.

The usual business of the first sitting ended with the reading of the President's address. At the second sitting the new officers were elected, consisting of John F. Hancock, of Baltimore, President; William Saunders, of London, Ontario, 1st Vice-President; Dr. Nichols, of Newark, N. J., 2d Vice-President; and J. T. Buck, of Mississippi, as 3d Vice-President; C. Lewis Diehl, Reporter on the Progress of Pharmacy, a new office created at the first sitting in accordance with the report of a committee appointed last year. The number of papers in answer to queries and volunteer papers was 36, several of considerable importance. Mr. Diehl presented the Report on the Progress of Pharmacy, having brought the report to July 1, 1873.

The Committee on the Centennial reported in favor of a course of procedure involving the idea of holding the meeting of 1875 in Boston, when, by taking time to consider, all the details should be decided on in advance, and extending a hearty welcome to our *comperes* in Europe and elsewhere to meet with us in 1876 at Philadelphia, and to take efficient means to render the welcome effective.

The exhibition was held in the basement of the building, and was creditable to the occasion, several firms being well represented in chemicals and pharmaceutical preparations. The members were invited to an excursion on the James River on Thursday afternoon at 3 o'clock, to go to Dutch Gap and back over an interesting portion of the river, the theatre of many events, especially Fort Darling, in the late war. The Mayor and many Richmond gentlemen were aboard, an excellent collation was spread and champagne flowed for those who desired it. On arriving at the Gap, rendered famous by General Butler, the steamer passed through it, turned and repassed on the homeward journey, when the Mayor being called for, made a most eloquent and amusing speech, pertinent to the occasion, and was followed by several members and others, the whole affair being one of unalloyed pleasure. The Association adjourned on Friday morning, to meet in Louisville, Ky., on the 2d Monday of September, 1874.

Prof. Maisch, on behalf of the delegation appointed to represent this College in the Convention of the Teaching Colleges, held at Richmond, made a verbal report. Joseph P. Remington was appointed by the delegation to fill the place of Prof. Robert Bridges, who did not attend. Two sessions were held by the Convention. At the first sitting the subjects of preliminary examination prior to entering, and the requirements for graduation by the various colleges, were discussed, and at the second session the question of conferring a

title in the place of the degree of graduate in pharmacy. The subject was deferred until the meeting next year.

A beautiful specimen of red cinchona bark was presented to the College by Messrs. Geo. D. Wetherill & Co., for display in the cabinet, or elsewhere, as the College may direct. It was much admired by the members present, and it is hoped will serve as a nucleus around which will cluster many fine specimens of materia medica from all parts of the country.

Prof. Maisch, on behalf of Fred. B. Power, presented a fine specimen of monobromated camphor, and from Louis Koch a number of illustrated sheets of materia medica, by Prof. Nees von Esenbeck, being parts of a work of great value.

On motion, they were all accepted, and the thanks of the College were directed to be presented to the donors.

A letter to Dillwyn Parrish, President of the College, was received and read as follows:

No. 225 S. BROAD STREET,
Friday, Sept. 26, 1873.

DILLWYN PARRISH, Esq.

Dear Sir.—Mr. Bechtel, an artist of this city, has just finished a portrait in oil of my late father, which I have had painted expressly for presentation to the Philadelphia College of Pharmacy.

It is a copy of a photograph carte de visite, similar to the one in the album of the College, which has always been considered a most excellent likeness of him up to the time of his declining health, two years ago.

This portrait I request of you, dear sir, to present to the College in my name.

Your obedient servant and friend,

A. B. DURAND.

The portrait was accepted, and, on motion, the Committee on Deceased Members was directed to acknowledge its receipt, and convey the thanks of the College to Mr. A. B. Durand for the valuable gift, representing, as it does, faithfully, one of our oldest and most valued members.

In connection with this presentation Prof. Procter, on behalf of the Committee on Deceased Members, read an interesting memorial of

ELIAS DURAND.

ELIAS DURAND (*Elie Magloire Durand*) was born in the town of Mayenne, France, on the 25th of January, 1794, second year of the French Republic, in the midst of the most trying times of the Reign of Terror, and was the youngest of fourteen children. His father, André Durand, was Recorder of Deeds at Mayenne, a man much respected, and though a royalist in opinion, he retained his position as recorder through the varying scenes and parties of the Revolutionary struggle and the Empire till his death, in 1810, being forced at times to secrete himself with the funds and records to save them from the party in temporary power.

During the period between 1794 and 1808 young Durand lived in his native town, and being placed in due course at the Collegiate school, passed through the regular studies. About this time his interest was attracted to the study of chemistry, then claiming a large share of scientific attention, which was probably the cause of his becoming a pharmacist, as in October, 1808, he was

entered as an apprentice to M. Chevallier, of Mayenne, a gentleman of great erudition, an excellent chemist and pharmacien, and well versed in the natural sciences.

From what can now be learned, M. Chevallier was remarkable for the great interest he took in his protégés, who were afforded every opportunity to acquire knowledge and skill in their profession. During the first winter of Durand's apprenticeship he pursued the study of natural philosophy and chemistry; in the spring he applied himself to botany. During the second winter his attention was directed to practical chemistry and the manipulations of the shop laboratory, his preceptor explaining from time to time, in the most lucid manner, the chemical reactions and combinations taking place during the operations carried on. The third winter was devoted to the study of *materia medica* and pharmacy, in connection with which his preceptor gave him instruction in the collateral branches, mineralogy, geology and entomology.

Elias Durand in after life often spoke of his great indebtedness to M. Chevallier for the varied elementary knowledge in the sciences which he had acquired under his able tuition, and for which he always felt grateful.

In 1812, when Napoleon was preparing the means for his invasion of Russia, every available man was called upon to enroll himself. Young Durand, having completed his apprenticeship, and attained the age of 18 years, became eligible for the army, and, not wishing to be conscripted into the ranks, made prompt application to the Minister of War for the position of *Pharmacien* in the Army, and immediately proceeded to Paris to prepare himself for examination before the Board of Examiners. There he attended the lectures of Thenard, Gay Lussac, Lefevre, Ginault, and a course of lectures on French literature, by the celebrated Andrieux, applying himself with great industry to his various studies. Having received notice from the Minister of War that the 10th of January, 1813, was appointed for his examination, he accordingly presented himself and underwent a strict scrutiny, his replies to the queries being made in writing. The next day he called on M. Parmentier, the Chief of the Pharmaceutical Department of the Army, to whom all the answers of the candidates were submitted, and received the flattering compliment that he had passed at the head of the list.

On the 2d of February he received his commission as *Pharmacien sous aide* in the 5th Corps of the Observation of the Elbe, with orders to cross the Rhine on the 15th of March. Having procured his uniform and accoutrements, he spent a short time with his family and friends at Mayenne, and on the appointed day presented his commission to Marshal Kellerman, commanding at Mayence, who ordered him to proceed at once to Magdeburg, the headquarters of the 5th Corps. He joined a detachment of fifty men from the Military Hospitals at Mayence, commanded by young officers from the Military School of St. Cyr, and was eleven days *en route* to Magdeburg, chiefly on foot, passing Frankfort, Giessen, Marburg, Cassel, Göttingen, Osterode, Goslar and Halberstadt. On arriving the men were nearly all entered in the 5th Corps, commanded by Prince Eugene Beauharnais, then numbering 70,000 men. Young Durand was assigned to the 3d Division, under La Grange, near Magdeburg, and continued in the army 14 months, till the abdication of Napoleon, having

been present at the battles of Möckern, Lützen, Bautzen, Hanau, Katsbach and Leipzig. During this brief period he experienced many severe hardships incident to a soldier's life, largely increased by the nature of the contest, which was virtually a retreat through a hostile country until they recrossed the Rhine. He was once taken prisoner, at Hanau, but managed to escape.

In his capacity of Pharmacien he was very little exposed to danger, unless voluntarily. His duty was to follow or precede the army, according as it advanced or retreated, and assist in the establishment of military hospitals when needed, so that when the army was in motion his duties were light, and being on horseback during battle, he was frequently an eye-witness to very important movements.

On the 3d of April, 1814, Durand tendered his resignation as *Pharmacien aide major* to M. Lodibert, the Pharmacien in Chief of the Corps (and afterwards President of the Société de Pharmacie), who urged him strongly to remain in the army, where efficient services had pointed him out for promotion, but he continued firm in his decision.

After a short visit to his home he went to the City of Nantes, well provided with letters, and obtained the situation of head clerk in the store of M. Frétaud, one of the principal apothecaries, where he remained two years. It was at this time that he gave his leisure, in real earnest, to the study of botany, passing all his vacations in botanical excursions with the principal botanists of the place. During a part of this time he directed the Society's laboratory, called *Laboratoire du jardin des Apothecaires*, and delivered a course of lectures on medical botany, during the summer months, to the apprentices in pharmacy, on the different medicinal plants cultivated in the garden. This laboratory was used in common by the principal pharmaciens of Nantes, to prepare their chemicals, and was so conducted that the management went by rotation, the materials contributed by different stores, say for calomel, nitrate of silver, ether or other medicine needed, were made up together, and the products divided *pro rata*. In this way a great variety of costly apparatus was available to each member, quite beyond his ability to possess, and his advanced apprentices were afforded opportunities to assist, and acquire practical knowledge.

On the return of Napoleon from Elba our young pharmacien joined the National Guard against the Royalist party of La Vendée during the 100 days. After the battle of Waterloo, and Napoleon's final abdication he returned to his duties at Nantes, but, being strongly suspected of Napoleonic proclivities, he was placed under military surveillance, and compelled to present himself every morning at the police station. This tyrannical order interfered very much with his business duties, caused great annoyance to his employer, and disgust at the treatment he received determined him to abandon his country and seek beyond the Atlantic the freedom denied him at home. Taking passage in the brig "La Nympe," at Nantes, on April 16th, 1816, he reached New York on the 1st of July following, and at once proceeded to Boston to visit Bishop Chevrus, afterwards Cardinal Chevrus, a distant relative, through whose influence he became acquainted with several scientific men of that city, of whom Dr. Joseph Warren urged him to remain in Boston, where his chem-

ical knowledge would receive encouragement. Mr. Perkins, a druggist, made him an offer to establish a laboratory for medicinal chemicals, with the prospect of a partnership. He accepted the offer, started the works on the French plan, and began the manufacture of Rochelle salt, tartar emetic, spirit and water of ammonia, ether, etc., but, though satisfied with his employer and with the success they were making, he became restless and, much to the disappointment of his new friends, and to the great vexation of Mr. Perkins, he determined to leave Boston for Philadelphia, the city of his choice. Here he took charge of the laboratory of a German named Wesner, where he manufactured chromates from the native ores of Maryland and Delaware. These salts were being successfully made when Wesner, desiring to extend his business, engaged in the preparation of the mercurial salts. This occupation occasioned Durand a spell of illness accompanied by profuse salivation, which induced him to abandon the laboratory and return to his legitimate business, pharmacy.

Mr. Durand next went to Baltimore, with satisfactory letters, and applied to E. Ducatel, a prominent pharmacist of that city, who would have engaged him but for his inability to speak the English language, and who advised him to devote himself to the study of that language, which he did for three months, at Belair, with considerable success.

Returning to Baltimore, he hoped to enter Mr. Ducatel's store, but the depressed state of business did not require additional service, and Mr. D. advised him to see Dr. Gerard Troost, of Cape Sable, Maryland (afterwards the first Professor of Chemistry in the Philadelphia College of Pharmacy in 1821), who was engaged in making iron salts, and might employ him till spring, when he hoped to be able to give him a position.

Disappointed but not discouraged, our young adventurer set out on foot to find Dr. Troost, in the midst of winter, the ground covered with snow, and the road unfrequented and difficult to find, owing to dense forests intervening, with only two houses on the road after leaving the vicinity of Baltimore. Having reached the first house noted on his paper about one o'clock, he applied for dinner. The appearance of the inmates was anything but favorable, and the wall of the room was hung with colored pictures of Indian massacres, which impressed his imagination strongly. After paying for the ill-relished meal of pork and beans he continued his forest journey about two miles, when he saw coming towards him some ten or twelve persons, strangely attired, quite different from anything he had seen before. As they came near it became apparent that they were wrapped in blankets, had painted faces, carried bows and arrows, and in fact were the counterpart of the pictures, being the first live Indians he had seen. With his ideas excited by the pictures he had just examined, aided by the uncouth character of the people at the house, he had some doubts of his personal security when thus brought face to face with the red skins in the forest, and for a moment felt undecided whether to advance or retreat, but, going towards them, one of the chiefs came forward and presented a paper for his perusal, which proved to be a recommendation from the President of the United States, stating that the chief and his warriors had been faithful to the country during the war of 1812 on the frontier. Our traveller,

greatly relieved from his embarrassment, gave the chief some money, shook hands with each of the troop, gave a hearty hurrah! with his hat off, to which the Indians responded and passed on their way. Continuing his journey the snow increased, night set in before attaining his destination, and seeing a light in the distance, he went towards it for shelter until morning.

He was kindly received, and, on inquiry for Dr. Troost was informed that he was four miles out of his way, and was invited to remain. A death had occurred in the family, many relatives had gathered to attend the funeral on the morrow, and no other place could be offered him for lodging than the room where the dead man was laid out. This was not objected to, and, fatigued with his long journey, our young friend slept soundly, and arose much refreshed. Having attended the funeral, the first country burial he had seen in America, he was greatly surprised at the dinner feast which followed on the return of the guests to the house, and of which he partook, reminding him more of a marriage occasion. His host kindly sent him to Dr. Troost's with a negro guide.

Mr. Durand was kindly received by the Doctor, who, however, did not need his services, as the rough processes of his copperas manufacture were chiefly conducted by negroes, but invited him to remain and keep him company as his guest, being much in need of social intercourse in his isolated home. He found Dr. Troost a learned chemist, mineralogist, and geologist, with a general acquaintance with the sciences, and when urged, accepted the hospitable invitation to remain until the end of winter.

About this time he received proposals from Mr. Ducatel to take charge of the pharmaceutical part of his business, and on the 5th of April, 1817, he entered on the duties of his new position. His professional knowledge was appreciated, business flourished, his employer was well satisfied, and extended toward his new clerk many acts of kindness as well as his love and affection. Mr. Durand often spoke of the social advantages he received whilst resident with Mr. Ducatel, among which was meeting with eminent Frenchmen in exile. It was during his stay in Baltimore that he began to study American botany and to form the nucleus of the great herbarium which he afterwards acquired.

On the 20th of November, 1820, he married the daughter of his friend and employer, Miss Polymnia Rose Ducatel, who died on the 18th of February, 1822, leaving an infant daughter, who lived to the age of 14 years.

In May, 1823, E. Ducatel retired from business, leaving his establishment to his son Jules Ducatel (afterwards Professor of Chemistry in the University of Maryland), and his son-in-law, E. Durand, who entered copartnership as E. Ducatel & Sons, which continued only a year, Durand retiring, with the view of establishing himself in Philadelphia. He also determined to visit France, to procure his *matériel*, and in July, 1824, he left New York for Havre in the ship "Sylvie de Grace," arriving on the 14th of August. His time was employed in selecting stock, apparatus and bottles (which were duly labelled for use and of the heavy French pattern), together with everything needful for a first-class French "officine," and returned in the same vessel to New York on April 22d, 1825.

The house then existing at the south-west corner of Sixth and Chestnut streets, where the "Ledger" office now stands, was occupied by Alderman

Barker, who, for a consideration of \$500, ceded to Durand a ten years' lease. The necessary alterations were rapidly pushed forward, and on the reception of his goods he fitted up the store at considerable expense, using French glass ware, porcelain jars, mahogany drawers and marble counter, in a style unique and attractive in that day. But the most important part was the stock of drugs and chemicals he had selected, including many novelties, and the apparatus for making and vending carbonic acid water.

Coming well recommended from Baltimore, as well as from abroad, the principal physicians, Physic, La Roche, Monges, Bache, Jackson, Griffith, Dewees and others were prompt in patronizing the store, and its enterprising proprietor soon had a flourishing business.

On the 25th of October, 1825, Mr. Durand married a second time, to Miss Marie Antoinette Berauld, daughter of a merchant of Norfolk, Va., one of the French refugees from the St. Domingo Insurrection. (He had four children by this marriage, all of whom died young, except his son, Alfred B. Durand, who survives him.)

In 1825 he was elected a member of the Academy of Natural Sciences of Philadelphia. This brought him into contact with men of science and opened a field of usefulness for his botanical talents, which he cultivated with great zeal and success, and corresponded with many botanists in Europe, by which his collection of plants was greatly extended. In the same year he became a member of the Philadelphia College of Pharmacy, and in 1832 was elected a corresponding member of the *Société de Pharmacie* of Paris, and contributed valuable original articles to the Journals of both Societies. In fact he wrote the first article of the first regular series of the *American Journal of Pharmacy*, and others are scattered through the following ten volumes. In 1829, in connection with Dr. Togno, he translated and published Edwards and Vavasseur's Manual of Materia Medica and Pharmacy, to which he made many additions of a pharmaceutical character, before the publication of the United States Dispensatory.

At the period when Durand opened his store French Pharmacy stood confessedly by far in advance of that of all other countries, whilst his thorough education and recent visit to France for stock, etc., gave him such great advantages that his store became an important centre of pharmaceutical information, which directly and indirectly had much to do with the introduction of scientific pharmacy into Philadelphia, and through this College, its Journal and graduates into the United States. Many of the finer medicinal chemicals were made in this country first by Durand, which gave him a prestige in that direction, and his great skill as a pharmacist, his untiring industry, close attention to business and social and scientific qualities attracted the most eminent physicians to his store, which became the daily resort of such men as Drs. Horner, McClellan, Mitchell, Meigs, Mütter, Bache and Goddard. The possession of a good library, and the monthly reception of important foreign journals, enabled him to study new medicines promptly; and, in looking back, it will be found that many new preparations, as solution of iodide of iron, Kermes mineral as now made, iodide of arsenic, iron by hydrogen, etc., were first introduced through his store. This devotion to his profession soon rendered "Durand's

drug store" well known to the general public, and gave a great impetus to his prescription business.

Durand took pains in training his apprentices, and some of our best pharmacutists emanated from his counter. He required of them daily study of articles in the Dispensatory, and it was his custom to examine the packages of drugs for stock when received, making it the occasion to point out to his boys and assistants the faults and merits of the articles. Looking at Pharmacy as a profession, requiring education and training for its success, he taught them to respect their business, and always manifested a warm interest in their progress. One of his élèves has said "he never required those in his employ to do that which he would not willingly do himself, and his intercourse with them was not that of master, but of a genial friend." The writer remembers gratefully when, in early life, he was engaged in investigations under great disadvantages for want of accurate instruments, his friend Durand imported a set of French metrical weights, and presented them to him with a word of encouragement.

In 1835 Durand was the first to introduce the bottling of mineral waters in this country, and opened a large establishment in Sixth street above Arch. The apparatus for manufacturing the waters, and especially that part of it for bottling under pressure, was of his own invention and superior to any then in use in France. He afterwards sent the latter to the Société de Pharmacie, and it was adopted into use in Paris. He also at this time extensively manufactured vinegar from cider by a quick process, by which air was forced through the cider and rapidly acetified it. This business was in full and successful operation when the money crisis of 1837 prostrated the commercial community, and with it this branch of his business, with great loss to the manufacturer, who afterwards adhered closely to his legitimate profession until his retirement.

About this period, and for many years after, various valuable contributions to American pharmacy came from Durand's store, through the late Augustine Duhamel, who was a protégé of Durand and identified with his store, having been for many years his chief clerk. The process of displacement, now called percolation, was there first introduced in this country by Duhamel, and his active pen placed on record, in the *American Journal of Pharmacy*, from vol. vi to vol. xviii, many valuable evidences of his industry and research.

A peculiarity of Durand's business was the number of specialties he introduced, original or of foreign origin, partially growing out of the patronage of particular physicians. His long experience had given him considerable knowledge in therapeutics, and his medical friends willingly availed themselves of his hints, in his efforts to render their prescriptions elegant and acceptable, as well as efficient compounds.

The relations of Dr. Samuel Jackson with Durand have been much misunderstood, and the cause of jealous and unkind remarks, and at one time even influenced the action of the College of Pharmacy in reference to that physician. Dr. Jackson was remarkable for his mental activity, and having for six years been professor of *Materia Medica* in our college, and one of its earliest members, had a *penchant* for new remedies. His patronage of Durand appears to have been entirely influenced by his respect for the talents of the latter as a pharmacist and chemist, and by the valuable suggestive aid received from him when called upon to meet emergencies in therapeutics. Dr.

Jackson would call in and say, "Friend Durand, I would like to use such and such medicines in combination; now do your best to make me an efficient preparation as agreeable as possible;" Mr. Durand would then study out the practical difficulties and get the medicine into shape. In this way many preparations came into use in Philadelphia, first in small quantities, but gradually, by the frequent prescribing of them by Dr. Jackson, became popular medicines, sold in large quantities with printed labels. The use of Dr. Jackson's name in connection with some of these preparations was an accidental occurrence, arising from the patients of that physician asking for them as "Dr. Jackson's"—a course perhaps encouraged by the extreme liberality of Dr. Jackson—but, when too late to recall it, Mr. Durand deeply regretted having unintentionally involved his friend and patron in a question of professional ethics. Among these may be mentioned "Jackson's Pectoral Syrup," "Jackson's Pectoral," and "Ammonia Lozenges," "The Saline Aperient," a compound of tartrate of soda, bicarbonate of soda and cream of tartar with oil of lemon, "Narcotic Cigarettes," "A peculiar denarcotized laudanum," the forerunner of "McMunn's Elixir," "Syrup of Phosphate of Lime," and "Compound Mixture of the Phosphates," afterwards made into a syrup, came into use from his prescriptions, at Durand's. Phosphate of potash was here first made for medicinal use for Dr. Jackson, for the "compound syrup of the phosphates," which still continues in use in modified forms as made by Blair, Parrish and others. Extractum sanguinis, made from the blood of the ox deprived of its corpuscles, was also a suggestion of Dr. Jackson. The "Powder" and "Elixir" of Dr. Castillon, of Cuba, Cucumber ointment, Lartigue's pills and various noted French preparations, as Baume Tranquille, Baume Genevieve, Onguent de la Mère and Leroy's medicines were introduced by Durand, and he was the first to import and dispense "Quevenne's iron by hydrogen" in pills, at the suggestion of Dr. Meigs, who prescribed them in large quantities in a great variety of cases.

Through all the varied engagements, disappointments and losses of our friend, his interest in botany never wavered, and appears to have been a source of great pleasure and satisfaction. In 1837 he made an expedition to the Great Dismal Swamp of Virginia, where he acquired many interesting specimens. His friendly relations with Joseph Bonaparte (Count Souvilliers) caused him often to visit the fine country seat of the latter, at Bordentown, famous for its botanical treasures, where he met and was useful to many of his countrymen in exile in their inquiries regarding American institutions. He spoke of the Count as a man of mild and polished manners, unaffected, and gifted with a most agreeable flow of language. Possessing great erudition, he yet suited his conversation to the one conversing with him, making intercourse with him pleasant and agreeable, and he seemed to be perfectly familiar with all the natural sciences.

In 1840, when the Philadelphia College of Pharmacy was invited to assist in the revision of the U. S. Pharmacopœia, Durand was one of the Committee appointed to that service, in which he took part and contributed valuable suggestions to the work, several of which yet remain after three successive revisions. The writer served with him on this Committee, and well remembers his valuable labors and counsel given on that occasion.

In 1844 Durand was elected Vice-President of the College of Pharmacy. In 1851 Mrs. Durand, who, during twenty-six years had been his companion and friend, died at their home on Ninth street, which event induced him to retire from business in favor of his son, and devote his leisure time entirely to botanical studies. Though so long a resident of the United States, and possessing an excellent command of the English language so as to write it fluently and correctly, his conversation was always marked with a French accent, and sometimes with French idiom. He was a good Latin scholar, wrote with great facility in a close set hand-writing, and was the author of several biographical and scientific memoirs. In 1854 he was elected a member of the American Philosophical Society, and was subsequently one of its curators.

In 1855 he published, in connection with Dr. Hilgard, a memoir on the plants collected in the expedition of Lieut. R. Williamson, U. S. Engineer, to California, and another, called "*Plantæ Prattenense*," on an extensive collection of plants made by Mr. Pratten in Nevada and adjacent territory. In 1856 he published an enumeration of the plants collected in Dr. Kane's first expedition to the Arctic regions, in the Journal of the Academy. About this time he wrote and read before the Philosophical Society a biographical memoir of the late François André Michaux, the author of the "*Sylva Americana*," who willed a sum of money for the establishment of a park of American forest trees, which is now existing in Fairmount Park, and known as the "Michaux Grove." In 1857 he commenced the work of separating the North American plants in the herbarium of the Academy of Natural Sciences, and forming them into a distinct collection, which occupied him several years, often working four hours daily in the botanical room of the Academy. His labors in connection with this valued institution will, however, be more fittingly enlarged upon by a special memorialist appointed by the Academy. In this year he was elected an honorary member of the American Pharmaceutical Association. In 1859 he published a memoir entitled, "A Sketch of the Botany of the Basin of the Great Salt Lake of Utah."

In 1859 his friend, Dr. Thomas Nuttall, author of the three volumes in continuation of Michaux's Sylva and other works, and so many years the botanist in chief of the Academy of Natural Sciences at Philadelphia, died in England. The memoir written of him by Durand is said to be one of the best notices of that distinguished botanist and ornithologist, of whom he was the successor in the botanical department of the Academy.

In 1860 Durand visited France a second time, and derived great pleasure from intercourse with his relatives, and many friends who had been with him in "*The Grand Army*." He also for the first time visited England, and was greatly pleased with the gardens and museums of London and vicinity. Whilst in Paris he had occasion to examine the herbarium of the "*Garden of Plants*," and finding the collection of North American plants very incomplete, he determined to remedy the deficiency by sending over his own fine collection. Ascertaining, however, on his return, that he could yet make valuable additions to his collection, rendering it more complete, he subscribed to all the botanical expeditions, and set to work himself to collect, making excursions every summer,

returning always with rich harvests of plants. Finally, in 1868, after putting his herbarium in order by arranging the new specimens in proper position, he packed the whole carefully and shipped it to France, following it on the 26th of June, in company with his son and daughter-in-law, in the "Ville de Paris." Durand's collection, the work of many years, contained over 10,000 species and over 100,000 specimens from all parts of North America. This munificent gift to his native country was fully appreciated, especially by the professors at the Garden of Plants Museum, where it has been arranged in a special gallery, and labelled "*Herbia Durand*."

About the year 1858 Mr. Durand presented to the Philadelphia College of Pharmacy a general herbarium of about 12,000 specimens, which form the nucleus of the present collection in its museum.

After his return from France in 1869, he wrote an elaborate article on the genus *Vitis*, of North America, and the relation of the cultivated varieties of the grape to the natural species, together with remarks on the wines made in the United States, and sent it as a contribution to the proceedings of the Linnean Society of Bordeaux, France. This essay attracted considerable attention abroad, and was reprinted by the "Société d'Acclimatation," of Paris. He subsequently was elected to membership by both societies.

As a citizen, Durand took but little part in political or municipal affairs. His social and scientific qualities endeared him to all who came in close contact with him. One who knew him intimately says "he was a man of generous impulses, and his private charities were numerous." He was an active member of the French Benevolent Society, of Philadelphia, took an interest in rendering it available to his needy countrymen in this city, and remembered it in his Will.

After his last return from Europe our friend continued his interest in botany in favor of his collection at Paris, but many months ago, feeling that age was advancing, and that he had worked industriously and effectively during his long life, he gradually relinquished his scientific engagements. Finding his bodily powers and faculties depreciating, he quietly retired from his usual walks, and after a season of depressed intellectual vigor, he slowly faded away in the 80th year of his age, and died on the 14th of August, 1873, at his residence on Broad street, Philadelphia, honored and respected by all who knew him.

The reading of this paper was listened to with attention and elicited remarks from several members, among whom were Prof. Procter, Chas. Bullock, Robert Shoemaker, Samuel S. Garrigues and William C. Bakes. Reference was made to his methodical habit of instructing the young men in his employ in all the minutiae of his business; of his popularity with certain physicians because of his tact in combining new remedies with compatibles in an elegant manner suitable for administration, and of his general scientific attainments in his profession, each one presenting some feature of his life and character worthy of imitation; some habit or custom in his business which might with propriety be emulated, and all uniting in the fact that the College has lost one of its brightest ornaments, and science a distinguished votary.

Prof. Procter read the following paper on the decease of John H. Ecky, a member of the College, which was accepted and referred to the publishing committee.

John H. Ecky, formerly an active member of this College, died in Philadelphia on the 13th day of July, 1873, aged 61 years. He was the son of Anthony Ecky, one of the founders of our College, at that time a wholesale druggist, doing business at the north-east corner of Third and Walnut streets.

John H. Ecky served his apprenticeship to the drug and paint business with the late Jacob Bigonet, also a member of this College, in Lombard street below Sixth, with whom he afterwards entered into co-partnership, under the firm of J. Bigonet & Co., which continued several years.

Mr. Ecky at one time took much interest in this College, contributed to the Journal, and was a frequent attendant of the pharmaceutical meetings. He was warm-hearted and generous, had had a fair education, and was a reputable apothecary.

Charles Bullock referred to the decease of Dr. Frederick A. Keffer, a member of the College, formerly from Philadelphia, but late a resident of New Orleans, where he died recently after a short illness.

Charles Bullock called the attention of the College to the recent ruling of the Commissioner of Internal Revenue relative to the stamp tax on medicinal preparations, contrasting it with former rulings, and pointed out its inconsistency herewith.

On motion of Jas. T. Shinn, a committee of two, consisting of Robert Shoemaker and Joseph P. Remington, was appointed to proceed to Washington to confer with the Commissioner of Internal Revenue on the subject, and to endeavor to have the late ruling reversed, if possible.

Mr. Bullock offered the following preamble and resolutions for the total abolition of the stamp tax on medicines, which, on motion of A. B. Taylor, were adopted, and the Corresponding Secretary was directed to send a copy to each of the Colleges of Pharmacy and Pharmaceutical Associations in the United States.

Whereas, The stamp tax imposed by the internal revenue laws on medicines, as detailed in schedule C of the code, was, in the opinion of this College, intended to apply only to preparations known as "proprietary"—the term "proprietary" having long been defined as "a peculiar or exclusive right of possession;" and,

Whereas, Conflicting decisions have from time to time been given regarding the class of medicines coming under the operation of the stamp tax, causing great confusion, impeding business, and rendering druggists and manufacturers disposed to a conscientious fulfilment of the provisions of the law, liable to great annoyance, and often penalty, by reason of decisions of the department at variance with the opinions and long continued practice under former Commissioners of the Internal Revenue, and,

Whereas, the necessity for the continuance of the stamp tax on medicines appears questionable as a source of pecuniary revenue to the Government; therefore

Resolved, That this College, in its corporate capacity, do petition Congress, at its next session, to abolish such part of the internal revenue laws as relates to a stamp tax on medicines.

Resolved, That we invite the co-operation of the Colleges of Pharmacy and Pharmaceutical Associations in the United States to effect this purpose.

This being the Semi-Annual Meeting, an election for eight Trustees and a

Committee of three on Deceased Members was ordered. S. Mason McCollin and Joseph P. Remington acting as tellers, reported the following gentlemen elected to the respective duties.

Trustees.—Dr. Wilson H. Pile, Alfred B. Taylor, Evan T. Ellis, S. Mason McCollin, Charles Bullock, William C. Bakes, William McIntyre and Albert P. Brown.

Committee on Deceased Members.—Wm. Procter, Jr., Charles Bullock and Alfred B. Taylor.

Then on motion adjourned.

WILLIAM J. JENES, *Secretary.*

A Special Meeting of the Philadelphia College of Pharmacy was held October 21st, 1873, at the College Hall, Dillwyn Parrish, President, in the Chair; 39 members present.

The object of the meeting was to hear a report of the Committee appointed at the Semi-Annual Meeting in September to visit Washington for the purpose of endeavoring to effect a change in the ruling of the Commissioner of Internal Revenue relative to the stamp tax on medicines.

Joseph P. Remington, on behalf of the Committee, read an interesting report, the substance of which is embodied in the following abstract. The Committee, in conjunction with a similar one appointed by the Drug Exchange, visited the Commissioner of Internal Revenue at Washington on the 30th ult., presented their views, and stated the inconsistency, in their opinion, of the recent ruling with the decisions of previous Commissioners, and endeavored to effect a return to the original rule that had been followed since the passage of the law. They presented a number of cases for his opinion as to the requirements of the law regarding the necessity of a stamp when put up in packages ready for sale, such as laudanum, paregoric elixir, hive syrup, etc., with their respective labels specifying the dose to be given. The Commissioner called to his aid his assistant, and the two expounded the law, in accordance with their view of the matter, generally, however, at variance with the views entertained by the Committee, and sometimes at variance with one another, showing the whole subject to be a matter the depth of which was beyond their ability to fathom. The Commissioner acknowledged that the execution of the law gave him a great deal of trouble, and signified his willingness to assist in having it repealed. He was asked by the Committee if he had called in any experts to assist him in his decisions, and his reply was that he felt fully competent to decide upon the question. His mind seemed made up to carry out his recent ruling in full, but not until the trade had been made acquainted with the requirements of the department.

He explained the matter more fully by saying that "where physic and physician were supplied to the patient at the same time, as was the case where labels were used giving the name, dose and directions of the medicine, it was plain that a stamp was required," and he therefore ruled that the dose and directions were sufficient to make any medicine stampable; as instances a number of labels for special articles were cited, such as Epsom salts, one dose; castor oil, one dose; "both require stamps," was the reply. Seidlitz powders,

On this label the Commissioner and his assistants differed in judgment; one said that the ordinary direction did not indicate the dose, while the other contended that it did, and must be stamped.

The Committee, at last, finding it was useless to prolong the discussion, retired, satisfied that the trade must be prepared to meet the requirements of the recent letter of instructions issued by the Commissioner, until a modification of the law or its total repeal can be effected.

The report was fully considered and accepted, and will appear in full in the next number of the Journal.

Charles Bullock read a portion of the recent report published by the Drug Exchange. He clearly demonstrated the absurdity of the Commissioner's opinions on several points, and particularly in relation to the difference between a printed and a written label with directions, the first requiring a stamp and the latter being exempt.

The whole matter was fully discussed by Messrs. Shoemaker, Blair, R. C. Davis, W. B. Webb and others, each one presenting some embarrassing feature of the operation of the law, which would make it intolerable to the whole trade, and all were of opinion that nothing short of its repeal, so far as it relates to a tax on medicines prepared from published formulæ, would be satisfactory.

Mr. Vogelbach offered a resolution appointing a Committee to bring forward a test case for legal decision in the U. S. Court, supporting it with the argument that we had better meet the case at once.

Mr. A. H. Jones advocated no action in a legal point of view, but thought agitation of the subject desirable, both in the Journal of the College and in the public press. This view was coincided with by Prof. Procter, who advocated delay until after the meeting of Congress, when it was hoped that by properly presenting the case to the members of that body, a repeal of the law might be effected.

Mr. Vogelbach's resolution was then adopted as follows:

Resolved, That a Committee of this College be appointed to bring forward a test case under the recent ruling of the Commissioner of Internal Revenue before the U. S. District Court for the Eastern District of Pennsylvania, for a decision as regards the proper interpretation of Schedule C of Act of July 13th, 1864, and other sections applying to said schedule and amendments thereto, if in their opinion it is advisable to do so.

The Chair appointed Robert Shoemaker, Joseph P. Remington, Charles Bullock, James T. Shinn and Herman A. Vogelbach, the Committee; and the Meeting, on motion, added the President to their number.

Then on motion adjourned.

WILLIAM J. JENKS, *Secretary*.

Minutes of the Pharmaceutical Meeting.

A pharmaceutical meeting was held on the afternoon of October 21st, 1873, in the hall of the College. Present, twenty members. Dillwyn Parrish, President, in the chair.

Owing to the lateness of the hour at which the meeting was convened, on account of a preceding meeting occupying so much of the time, the number of members remaining was small.

Prof. Maisch read a letter from Clemmons Parrish, tendering his resignation as Registrar, his present engagements preventing his attending to the duties of the office. On motion, his resignation was accepted.

This being the regular time for electing a Registrar, as provided in the by-laws, Joseph P. Remington was elected to fill the office.

Richard V. Mattison read a paper on Fluid Extract of Ipecac,* in which he suggests an improvement in the present official formula, by depriving the percolate of the peculiar substance which causes turbidity, and decreasing the proportion of glycerin $12\frac{1}{2}$ per cent.

Dr. W. H. Pile called attention to a sample of adulterated oil of gaultheria, which seems now to be pressing on the market. The adulterating substance he found to be chloroform, and the means adopted for detecting the fraud were, first, by taking the specific gravity, and, secondly, noting the boiling-point. The specific gravity of true oil of gaultheria is 1.18, whilst that of the sample in question was 1.24. The boiling-point of the true oil is 400° F., whilst the adulterated oil boiled actively at 200° F. By shaking the adulterated oil in a test-tube, after slightly warming, the odor of chloroform is distinctly apparent. He ascertained that this impurity existed in the oil in the proportion of 1 part of chloroform to 4 parts of oil, and his mode of arriving at the quantitative estimation consisted in mixing certain proportions of chloroform and oil together until he obtained the same specific gravity as the adulterated sample had.

Charles Bullock stated that he had met with two cans of the oil, which he thought probably belonged to the same lot as that mentioned by Dr. Pile, and he exhibited a very neat and convenient little apparatus for detecting and separating the mixed liquids by fractional distillation. It consisted of a small glass flask, into which the oil was poured; a bulb-like stopper, having a tubulure at the top, which had a rather long tube leading from it at a similar angle to that usually seen in alembics, and a thermometer, which passed through the tubulure and into the bulb of the stopper. If heat is now applied to the flask, the temperature of the vapor which fills the bulb and is being condensed can easily be read off. By this method he was able to separate the chloroform from the oil, and he also found that it contained a very large portion of oil of sassafras. The manner in which the oil had been made seemed to have been: Take 4 or 5 lbs. oil of sassafras, 1 lb. oil of gaultheria, and chloroform sufficient quantity to bring up the specific gravity to the right point.

Prof. Maisch, speaking of oil of gaultheria adulterated with oil of sassafras, said that when the adulterated oil is treated in the cold with commercial nitric acid a deep red resinous mass separates, whilst the pure oil of gaultheria is not colored by it.

Charles Bullock reported that, having some suspicions that the heavy lubri-

*See page 481 of this number.

cating coal oils were used for the purposes of adulteration, he took the specific gravity of one of the most dense in the market, and found it to be only .883; he regarded them on this account unfit for the purpose.

Prof. Maisch exhibited three samples of Pareira brava, two of which differed from the kind usually seen in commerce of late years, and a sample of the real Pareira, which has been proved by Mr. Daniel Hanbury to be produced by *Chondodendron tomentosum*. The three spurious pareiras, all of which were mentioned in Mr. Hanbury's paper, were the usual commercial variety, with the layers of wood in more or less excentric layers; a sample of a bright yellow color internally and with the wood developed almost altogether in one direction, and a sample nearly tasteless, the wood of which is in more concentric layers; the sources of these three kinds are unknown, but all are derived from plants of the order Menispermaceæ.

Mr. Gaillard spoke of having received a sample of what purported to be French quinine, from a friend in the South, who had been offered the article at a very low price, and had sent him a portion to ascertain why it could be sold so low. It proved to be the old fraud—muriate of cinchonia.

Prof. Maisch read an extract from the "Circular of the Philadelphia Drug Exchange" in relation to this subject, as follows:

Cinchonia Muriate. From the "Druggists' Circular," New York, October, 1873, we extract the following statement, reported in the Transactions of the American Pharmaceutical Association at Richmond:

"Prof. Maisch drew attention to the fact that very large quantities of muriate of cinchonia had been put up in the style of French quinine, and having an imitation of Pelletier's label upon it, and that it had been extensively introduced in the Southern States.

"Dr. Squibb said that some of the manufacturers of quinia were in part responsible for this attempt to defraud the people, as they in the course of their manufacture accumulated large quantities of the cinchonia salts, and they disposed of them indiscriminately to any who applied for them."

We take occasion to say that, so far as American manufacturers of sulphate of quinia are concerned (1), they do not dispose of the cinchonia salts indiscriminately to any who apply for them, but only to regular customers who pay for them; and (2), so far from being responsible for this attempt to defraud the people, they purposely avoid handling *muriate of cinchonia*—they do not make the article.

We consider that this statement is eminently due to our friends who make sulph. quinia here, for they have not only declined making, but refuse to deal in, the article of *muriate of cinchonia*, on account of its close resemblance to *sulphate of quinia*.

Muriate of cinchonia is largely sold in Europe, but not in this country, so far as sulph. quinia manufacturers are interested.

It was suggested that advantage might be taken of the condition of affairs to ascertain what virtues muriate of cinchonia possesses as an antiperiodic.

Jos. P. Remington introduced the subject of Diluted Phosphoric Acid, and gave the results of an experiment based on a fact mentioned to him by Prof. Maisch, in which it was shown that diluted phosphoric acid, made from the phosphorus direct, according to the U. S. Pharmacopœia, would make a clear solution when mixed with an equal quantity of tincture of chloride of iron, whilst that made from the glacial phosphoric acid produced a precipitate when similarly mixed.

Prof. Maisch stated that it required repeated treatment with nitric acid in

the manner laid down in the second formula of the Pharmacopœia in order to thoroughly convert the monobasic into the tribasic variety.

The meeting then adjourned.

JOSEPH P. REMINGTON, *Registrar*.

Pharmaceutical Colleges and Associations.

VERMONT PHARMACEUTICAL ASSOCIATION.—The fourth annual meeting was held at Burlington, Vt., Sept. 24th and 25th, President Frederick Dutcher in the chair, A. W. Higgins, Secretary. After considerable discussion on the employment of the English language in prescriptions, the Association voted by a large majority in favor of the Latin. A committee for nominating officers was appointed, when the President delivered his annual address. An invitation was received from Messrs. Wells, Richardson & Co. for the members with their ladies to participate in an excursion to Plattsburg.

At the afternoon session the Treasurer's report was read, after which Prof. Seeley, of Middlebury College, delivered an address, dwelling on the importance of pharmaceutical education. The establishment of a pharmaceutical school was referred to a special committee for consideration, and report next year. The following officers were elected for the ensuing year: President, L. E. Sherman, Ludlow. Vice-Presidents, C. C. Bingham, St. Johnsbury; Dana J. Morrill, Swanton. Secretary, A. W. Higgins, Rutland. Treasurer, Collins Blakely, Montpelier.

The Association adjourned until the next morning, an account of which session has not been received.

THE TENNESSEE PHARMACEUTICAL ASSOCIATION was organized at the City of Nashville Oct. 9th and 10th. A constitution was adopted and committees were appointed on legislation and on code of ethics. A seal was also adopted. The following officers were elected: President, J. C. Wharton, of Nashville. Vice-Presidents, J. G. Rawlings, of Chattanooga; R. D. McCauley, of Clarksville, and J. B. Haddox, of Nashville. Secretary, Benj. Lillard, of Nashville. Treasurer, R. E. Page, of Nashville. Committee on Papers and Queries, W. G. Ewing, M. C. Currey, E. C. Laurent. Business Committee, B. H. Gordon, J. Richards, W. H. Smith. Committee on Legislation, W. D. Kline, J. R. Harwell, W. H. Wharton.

Prof. Lillard read a paper on Apprentices, which was ordered to be printed in the Nashville daily papers.

Jas. M. Safford, M.D., Ph.D., and J. Berrien, Lindsley, M.D., were elected honorary members, and after transacting some business of minor importance the Association adjourned, to meet again in Nashville on the third Tuesday of May, 1874.

THE TENTH ANNUAL MEETING OF THE BRITISH PHARMACEUTICAL CONFERENCE was held at the Church Institute, Bradford, Sept. 16th and 17th, Mr. H. B. Brady, F.L.S., F.C.S., President; Prof. J. Attfield, Secretary. Twelve local associations were represented by delegations, but the attendance of members

was hardly as numerous as on former occasions, owing to the increased hotel charges during the sessions of the Conference of the British Association for the Advancement of Science, which, as usual, have been held in the same city and about the same time. The album containing pictures of some of the officers and members of the American Pharmaceutical Association, which had been collected for this purpose by the Committee on Photographic Album of the latter Association, was laid before the Conference on the second day, while the letter announcing it was read at the first session, and a vote of thanks passed on motion of Mr. J. Williams. A resolution was passed directing a message of fraternal greetings to be sent to the American Pharmaceutical Association, then in session at Richmond. A number of new members were elected, after which Mr. F. Baden Bengier read the report of the Executive Committee, and Mr. J. F. Schacht the Treasurer's report. A resolution increasing the annual dues to 7s. 6d. was carried unanimously. The President then delivered his annual address, reviewing the origin of the Conference and the labors at the various meetings, the consolidation of several pharmacopœias into one for Great Britain and one for Germany, the introduction of new remedies and the revival of older ones, the acclimatization of the cinchonas into the East Indies, the experiments with various new remedies, and the pharmaceutical examinations in various countries, and closed with eloquent tributes to the memories of John Cargill Brough and Edward Parrish. The address is an excellent document, well calculated to assist in raising the status of pharmacy, and deserving the perusal of every pharmacist..

A paper read by Mr. Hampson suggested the propriety of physicians depending to any unusual dose ordered by them, a mark, indicating that in ordering such a dose, no mistake has occurred. The discussion following the reading of this paper resulted in the appointment of a committee whose report was directed to be communicated to the medical profession.

Several very interesting and important papers were read and freely discussed, which we hope to be able to lay before our readers.

Mr. T. B. Groves, of Weymouth, was elected the successor of Mr. Brady in the Presidential chair. The next meeting, in 1874, will be held in London, and Mr. M. Carteighe has been elected Local Secretary.

The annual dinner of the Conference took place, at the Victoria Hotel, on the evening of Sept. 16th, Mr. F. M. Rimmington in the chair.

PHARMACEUTICAL SOCIETY OF PARIS.—At the session of Aug. 6th, Mr. Grassi presiding, Dr. de Vrij communicated a note on the quantitative examination of cinchona barks; it was accompanied by a specimen of *Cinchona officinalis* and a sealed package indicating its composition. Mr. Boudet had received from Mr. Guilliermond fils a memoir on the assaying of cinchonas, in which he related the labors of his father on that important subject. A committee, consisting of Messrs. Baudrimont, Marais, Jungfleisch, P. Wurtz, St. Martin and P. Blondeau, was appointed to report on the comparative value of the processes suggested by Guilliermond, de Vrij and Carles. In a letter to Mr. Jungfleisch, de Vrij claims for Mr. Delondre the discovery of quinidia.

Mr. Buignet exhibited crystallized protiodide of mercury, prepared by Mr. P. Yvon, and read a paper detailing his process, which consists in heating mercury and iodine, in equivalent proportions, to not over 250° C.; the hot crystals are red, but become yellow, with a tint of orange, on cooling. Heated to 70° C., they become reddish, the color deepening with an increase of the temperature; at 220° they are of a beautiful garnet red, but become yellow again on cooling. They commence to sublime at 190°, fuse at 290° to a black liquid, which boils at 310° C. When rapidly heated a decomposition takes place, metallic mercury is given off, and a yellow sublimate of oxyiodide of mercury is obtained.

Various drugs were presented, after which Mr. Boudet gave a summary of the deliberations of the Academy of Medicine on the queries submitted by the Secretary of War in relation to the military pharmacists; the discussions had resulted in the adoption of the following:

- (1). The proposed fusion of medicine and pharmacy should be rejected as prejudicial to the interests of the army.
- (2). The actual organization of the military health service is not in accordance with the wants and interests of the army; the service should be placed under the direction of a competent chief, taken from its members.

The following proposition was rejected by the Academy of Medicine, by a large majority:

- (3). The autonomy of the health service requires, as a logical consequence, the subordination of pharmacy to medicine in the army.

A well-deserved vote of thanks was passed to Mr. Poggiale for his well-directed efforts in defending the cause of military pharmacy. Mr. Poggiale, who was present at the meeting, in thanking for the compliment, said that this vote should have included all who defended pharmacy, so unjustly attacked on this occasion, and particularly Messrs. Bussy, Dumas, Boudet and Gobley.

The pharmaceutical service in the French army, we believe, is the only one in which the just claims of pharmacy are recognized; and the Paris Pharmaceutical Society as well as the Academy of Medicine deserve the thanks of the pharmacists of all countries for resisting an attempt to make undone what the history of the French service since the beginning of this century has proved to be a wise arrangement, in which other nations would do well to follow such a proud example.

THE GERMAN APOTHECARIES' SOCIETY held its second annual meeting, Sept. 2d, in the City of Cologne, Dr. Schacht, President; Messrs. Endenthum and Nienhaus, Recording Secretaries. The annual report of the President gave an account of the activity of the directory during the past year, and stated that the membership had increased from 1472 to 2600 during the last year. After disposing of the financial reports, a resolution by Prof. Reichardt was passed, declaring the chemical examinations of waters in their sanitary relations to be an important object of the apothecaries of Germany, and requesting them to take part and further these measures as much as possible. Resolutions were likewise passed favoring the establishment of one scientific organ of the Ger

man Apothecaries' Society, and the abrogation of the contract with the "Pharmaceutische Zeitung;" also to empower the directory to confer with the War Department, with the view of regulating military pharmacy.

During the second session Prof. Dragendorff, of Dorpat, delivered a lecture on some important proximate principles of vegetables, and on the qualitative and quantitative examination of adulterations of volatile oils with cheaper oils. Prof. Reichardt and Mr. Rostel were elected delegates to the meeting of the German Sanitary Union, at Frankfort.

After the filling of vacancies in the directory various scientific subjects were discussed. Mr. Hildebrand spoke on explosions by mixtures of chlorinated lime, and on soluble pepsin; Albers, on the German Pharmacopœia; Drs. Brunnengraeber, Schacht and Werner, on the necessity of rectifying chloroform which is to be used for inhalation, to free it from muriatic acid; Dr. Reichardt, on hyoscyamia and atropia, and their products of decomposition under the influence of alkalies and acids.

The Society adjourned finally after having selected Munich as the place for holding the third annual meeting.

THE TWELFTH ANNUAL MEETING OF THE GENERAL AUSTRIAN APOTHECARIES' SOCIETY was held, in Vienna, Sept. 15th and 16th. At the first session the annual report of the Directory was submitted, the Treasurer's report read, and the publication of a text-book on pharmacy resolved upon. The subject of an international Pharmacopœia was discussed, and the labors of the Paris Pharmaceutical Society in this direction related. Dr. Goddefroy delivered a lecture on the progress of chemistry as exemplified by the products exhibited at the World's Exposition in Vienna, which was visited by the Society in a body during the afternoon, Dr. Goddefroy and Mr. Klinger acting as guides.

The following officers were elected at the second session: Messrs. Schiffner, Fausner and Von Waldheim, Directors; Simoni, Treasurer; Ferd. Kwisda, Secretary. Mr. Heindl made a donation of 100 florins to the Society. Messrs. Mall and Stapf made valuable donations to the Museum. The next annual meeting will again be held in Vienna.

THE INTERNATIONAL MEDICAL CONGRESS lately held in Vienna declared in favor of compulsory vaccination by a vote of 155 against 5. The desirability of an international Pharmacopœia was acknowledged; this should contain the most important remedies, with an exact description of their physical properties and of the processes for their preparation; Latin should be the language of the official text; the proportions of the compound preparations should be given in decimal numbers. The Congress desired that prescriptions be hereafter compounded by metrical weights. The officers of the fourth Congress were empowered to organize an international commission for the purposes named.—*Pharm. Zeit.*

NEW YORK COLLEGE OF PHARMACY.—At the first conversational meeting of the present session, Prof. Chandler delivered a lecture on Ozon.

Editorial Department.

STAMPING OF PROPRIETARY MEDICINES.—In the October number we had stitched a copy of a letter of Internal Revenue Commissioner J. W. Douglass, dated Sept. 9th, wherein that officer gives the latest decisions in regard to the stamping of medicines as provided by what is known as the Internal Revenue Law, a law, by the way, which has been a book sealed with seven seals to very many officers previous to this last effusion of authoritative interpretation, which, in our humble opinion, is not in harmony with the spirit of the law, or with its letter either. We have no space for any extended remarks on this subject, which has been an annoyance to many pharmacists, in various parts of the country, for several years past; but we appreciate the endeavor of Supervisor A. P. Tutton to remove at once all doubt concerning this law and the duties of the pharmacists under it. We cannot believe for a moment that the rulings of the Commissioner, the highest officer under this law, will be sustained if the question should be fairly placed before the legal tribunals. The action of the Philadelphia College of Pharmacy on this question will be found upon another page, and we are pleased to be able to state now that, as far as heard from, the pharmaceutical associations of other localities coincide with these views. The surest way to create opposition to a law is, we believe, in making its application odious; and in this the Commissioner has succeeded so perfectly, that the public would feel the oppression keenly if the matter could be properly placed before it. We intend to refer to it again in a future number.

PHARMACEUTICAL JOURNALS.—We have just received the fourth number of the 22d volume of Wittstein's *Vierteljahres-Schrift*, and regret to state that its publication will be discontinued. Dr. Wittstein is so well known to our readers as a veteran laborer in the cause of pharmaceutical education and progress, that this discontinuance will be regarded with regret, and with the hope that his pen may not cease writing altogether in the service to which it has been devoted for nearly four decades.

Another change is contemplated by the German Apothecaries' Society. The action taken at its last meeting at Cologne looks very much as if the fusion of the "*Archiv*" and "*Neues Jahrbuch*" into one journal was contemplated. Such a change would concentrate so much talent into one publication as to insure its literary success beyond a doubt.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Chemistry, inorganic and organic: with Experiments. By Charles Loudon Bloxam, Professor of Chemistry in King's College, London, &c. With 295 Illustrations. From the second and revised English edition. Philadelphia: Henry C. Lea. 1873. 8vo. pp. 700. Price, cloth, \$4.50; leather, \$6.50.

This is an excellent work, well adapted for the beginner and the advanced student of chemistry. The numerous facts, the established laws and the various theories are given and explained so comprehensively and with such accuracy, as to show at once not only the able chemist, but likewise the experienced teacher. In the beginning of the work, the use of technical terms is almost altogether avoided, while considerable prominence is given to illustrative experiments, all of which are well described, well explained, and usually illustrated with appropriate wood cuts. Many of the processes of applied chemistry are described, and, with their apparatus, illustrated. With the adoption of the atomic system of notation ($O=16$, &c.) now employed by the large majority of chemists, the author is not disposed to adopt the binary theory of the constitution of salts; hence the old nomenclature for the salts has been retained, together with the formulas, modified, of course, by the change in the atomic weights; but the binary formulas are frequently placed alongside of the former; thus we find for bicarbonate of soda $Na_2 O. CO_2. H_2O. CO_2$ or $NaHCO_3$. Organic chemistry is treated upon nearly 200 pages; the space allotted to it, therefore, does not permit to enter as largely into details as in the first part; but all the classes of organic compounds have been duly considered, and those of some importance in the arts or otherwise more extensively described.

Not the least commendable feature of the work is the good and useful index, which contains not only the names of all the elements and compounds mentioned, but also their symbols, and the formulas of many, so that bicarbonate of soda, for instance, is met with not only under the letter *S*, but likewise under *N*, as $NaHCO_3$.

A careful examination of this work has convinced us that it is one of the best for the student of chemistry in its general relations, and in its applications to metallurgy and other extensive industrial manufactures.

An Introduction to Practical Chemistry; including Analysis. By John E. Bowman, F.C.S., &c. Edited by C. L. Bloxam, F.C.S., &c. Sixth American from the sixth and revised English edition. Philadelphia: H. C. Lea. 1873. 12mo. pp. 339. Price, \$2.25.

The number of editions through which this little work has passed, is sufficient evidence of its value to the chemical student; by its present editor it has been thoroughly revised and enlarged by many additions. It appears to be particularly adapted for the advancement of those students who may be compelled to experiment with little assistance from an instructor.

The Physician's Visiting List for 1874. Philadelphia: Lindsay & Blakiston. Price, \$1,—(for 25 patients weekly), &c.

This being the twenty-third year of the publication of this list, its convenient arrangement and its usefulness are too well known and appreciated to require any further comment.

An Account of the Cholera as it appeared at Nashville in the year 1873. By W. K. Bowling, M.D. Nashville, Tenn.: 1873. 8vo. 63 pages.

Its title explains the contents of this pamphlet, which is a reprint from the Nashville Journal of Medicine and Surgery, and contains a map of the city of Nashville and its vicinity.